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PART I.

ORIGINAL COMMUNICATIONS.

ART. VII.—*Observations on the Application of the Seton, in ununited Fractures,—with Cases; also a Case of Resection of Portions of the Tibia and Fibula to remove Deformity,—with Illustrations.* By FRANCIS RYND, A.M., F.R.C.S., Surgeon to the Meath Hospital.

AMONGST the embarrassments occasionally experienced by the practical surgeon, ununited fractures hold a very prominent position. After the patient has submitted to confinement perhaps for weeks, and during that time been subjected to restraint, which, under the most favourable circumstances, must have been irksome and unpleasant, there can be nothing more disheartening to him and more distressing to his surgeon than the discovery that little or no progress has been made in the cure, and that the injured limb remains as powerless and as incapable of affording support or motion as it had been immediately after the accident. It forms no part of my present purpose to enter on an inquiry as to the causes that may occa-

sion this very untoward occurrence; they are enumerated in every systematic work, and so numerous that one might well be surprised at its comparative infrequency,—such as indiscretion or impatience on the part of the sufferer; carelessness or incompetency in the surgeon; age, habit, and temperament of the patient; or the presence in his constitution of some vice or taint, such as scrofula, venereal, scurvy, or cancer. Still less am I disposed to consider the discrepancies of opinion that prevail as to the pathology of the affection, and the condition in which the ends of the fragments may exist, although it is obvious that if a variety of causes can contribute to the non-union of fracture, and if the faces of the fragments are found in such different conditions as stated by Larrey, Boyer, and others, any one mode of treatment can scarcely be applicable to every case. Accordingly, such has practically been found to be the case; and the different plans that, from time to time, have been recommended, besides the great objections of pain and danger, are open to the greater one of having proved generally unsuccessful. I shall briefly notice two or three of these.

Friction of the ends of the fragments on each other has at least the merit of antiquity on its side, having been recommended by Celsus, but in modern days it derives its chief support from the authority of John Hunter: it is, however, based on imperfect or erroneous notions of pathology. If it be assumed that the faces of the fragments are coated with a substance resembling cartilage, and have in other respects approached the structure of an articulation, then friction can only be of service when carried to the extent of rubbing away this new material, breaking up all adventitious formations, and reducing the ends of the bones to a state as nearly as possible resembling that of a recent fracture; thus supposing the infliction of a degree of violence scarcely practicable, and which could not be endured if it was so. Again, if with Boyer we believe that the fragments are actually bound together by a ligamentous substance in every case, and that the diseased con-

dition consists in the formation of a soft and yielding, instead of a firm and bony union, it is manifest that no friction short of that which would be sufficient to break the ligament could be likely to prove beneficial. If these remarks are correct, friction is generally inapplicable in old and advanced cases, and, according to my experience, has always proved so; but in recent cases, when the process of union is delayed rather than stopped, when there is a sluggishness and inactivity rather than a cessation of the restorative functions, then the stimulus of a little additional violence may possibly prove advantageous, although in such circumstances the same result might, in most instances, be more safely attained by rest and confinement, if the patient could be induced to submit.

As to the proposal of White, to cut down on the fracture, and saw away the ends of the fragments, I suppose no surgeon of the present day could seriously entertain it. It would be the conversion of the case into a compound fracture of the worst form, and that too in the teeth of some undiscovered cause that had been sufficient to prevent the union of a simple one. It would also be most difficult of performance, and, if successful, must place the bones in a condition in which many surgeons believe nothing but a ligamentous union could occur, namely, with a considerable interval of space between the fragments: and when the necessary consequences of the operation are taken into account,—the inflammation, the fever, the tedious and wasting suppuration, the protracted suffering of the unhappy patient,—very little argument will suffice for nearly erasing this one from the list of surgical operations. I once had occasion to cut down on a fracture that had been greatly mismanaged, and remove portions of the crooked bones, which occasioned an intolerable deformity, and the results of that case, although ultimately successful, were such as to prove the extreme danger attendant on the operation, and establish the opinion of Boyer, that it ought not to be performed unless "lors qu'elle est le seul moyen de guerison et que le malade veut *à tout prix* re-

couvrer l'usage d'un membre inutile." I have added this case to those successfully treated by the seton.

The passage of a seton between the ends of the ununited fragments, as suggested and successfully practised by Dr. Physick, of New York, although less objectionable than the preceding, is nevertheless attended with danger, and, like all others, uncertain in its result, having failed in the hands of very eminent practitioners. This, however, is only to be expected; for, if the process of union has been arrested by some constitutional defect, it will be vain to hope for benefit from any local treatment until such defect is discovered and removed. It appears to be, in many instances, difficult of performance, particularly when the limb is large and fleshy, and the fracture deeply-seated; and dangerous, especially in hospital, from the risk of erysipelas or other unhealthy inflammation attacking such a deep and narrow wound; and that if it could be superseded by some more simple, yet equally efficacious expedient, a valuable improvement would be effected in this department of surgery. Influenced by these considerations, I venture to publish the following cases; and although fully aware that the successful issue of three or four, or even a greater number of cases, must be inadequate to the establishment of a general principle, yet it will effect something if it attracts attention, and leads to other and more extensive trials; and if the comparatively mild practice I have pursued shall appear worthy of adoption by others, and prove even as effectual as the more painful and perilous measures, in relieving a serious and formidable class of injuries, I shall hope for its admission as an improvement in practical surgery.

I. *Ununited Fracture of the Tibia and Fibula; Employment of the Seton; Recovery.*

Eliza Kavanagh, aged twenty-four years, had both bones of the right leg fractured about five inches above the ankle-joint, from a fall she received on the 7th of May, 1839. She

was otherwise in excellent health, and had always been free from any diseased taint. On the day of the accident she was admitted into the Meath Hospital, splints were applied to the limb, and she was treated with the usual care and precautions, notwithstanding which it was found impossible to procure bony union. Among other means, friction of the broken extremities on each other was tried without any success.

On Thursday, the 25th of July, eleven weeks after the accident occurred, I introduced a seton, made of silk, over the fractured extremities, in the following manner: A curved seton-needle was passed into the inside of the leg, exactly opposite to the fracture, through the integuments, so deeply as nearly to touch the posterior internal edge of the tibia; it was then directed in a semicircular course anteriorly, over and close to the prominent extremities of the fractured bones, and was brought out on the outside of the limb, so that the fracture lay between the points of its entrance and exit. It did not either touch or pass between the fractured extremities of the bones. The ends of the seton were secured, and the patient was enjoined to preserve perfect rest.

August 1st. There is considerable inflammation over the leg, but chiefly along the course of the seton. Ordered a saline aperient, with tartrate of antimony.

8th. Inflammation abated considerably; the openings made by the seton are discharging; no pain in the seat of fracture; the limb has been kept at perfect rest. Ordered a linseed-meal poultice over the openings.

18th. The limb was very cautiously examined to-day: there appeared to be perfect union, but the fear of disturbing the process prevented such an examination being made as would authorize a decided opinion being given. The seton does not cause much discharge, nor give pain; there is not any ulceration, except immediately round the openings. The patient was enjoined to remain in a state of perfect rest.

22nd. The union appears perfect; there is not the slightest

motion in the fractured part; says she walked in the ward this morning with the assistance of a crutch.

24th. She walked very steadily to-day, and felt no inconvenience except from pain and stiffness in her ankle-joints, which are caused by want of use. Ordered to have a stream of tepid water poured from a kettle on the joints for a quarter of an hour, and then to have them well rubbed with chamois leather. Seton removed.

September 1st. Has used and still uses the douche and shampooing. The union is perfectly firm; she wears a bandage on the leg; walks steadily and with ease; uneasiness has nearly gone from the joints, and she is considered sufficiently well to be dismissed.

This woman has come to the hospital frequently since for inspection, and has never had the least uncomfortable sensation from the injury, nor is there any difference in the length of the limbs: the fractured leg performs its functions perfectly.

The next case possesses an equal, perhaps a greater degree of interest; for, having been to a certain extent unsuccessful in hospital, it teaches the absolute necessity of attending to the accessorial measures of perfect rest and the exact maintenance of the fragments in their position: it may also afford a practical hint not to be over-curious or incautious in examining prematurely into the process of the case.

II. *Fracture of the Humerus ununited at the end of ten Months; Employment of the Seton; unossified Union; final Recovery.*

John Reilly, aged thirty years, was admitted into hospital on the 7th September, 1839, with ununited fracture of the left humerus. The bone appears to have been fractured obliquely in its lower third, immediately above the condyles; the fragments are quite moveable in the situation of the fracture; and when he attempts to raise the fore-arm, its weight dislocates the fragments at the point of fracture, and the pressure of the lower one against the brachial nerves and vessels gives him so much

pain that he is obliged to desist; besides this, he cannot raise it or direct its motions except by taking hold of the hand with the other; in short, the limb is useless. The fore-arm, with the adjoining articulated portion of humerus, can be rotated on the upper portion; there is not any sensation of crepitus, and the surfaces appear to be smooth. He states that the arm was broken fourteen months ago, by a fall from a wall; it was put up in splints, and the usual treatment prescribed. At the end of two months it was examined, and found to be ununited; the fragments were well rubbed together, and the splints were re-applied; at the expiration of two months more it was examined again, but no union existed; a long interval elapsed without anything being done, and finally he has come here for relief.

10th. I introduced the seton, by passing in the needle posterior to the brachial vessels, and pushing it round the back of the arm, over and close to the fractured extremities, until it came out at the external edge of the biceps muscle; the arm was bandaged and put in splints.

12th. Complains of pain and heat in the arm; says it feels tightly bound; pulse 90; bandage and splints removed; ordered compound infusion of roses, with sulphate of magnesia, to be taken every second hour, to move the bowels; and a linseed-meal poultice to the arm.

14th. No increase of inflammation, but feels the arm tense. Ordered a poultice over the course of the seton, saline mixture, and two grains of James's powder three times a day.

19th. Inflammatory symptoms have nearly subsided, and healthy pus issues from the wounds; there is a good deal of swelling of the arm.

23rd. I made gentle pressure along the course of the seton, and gave exit to about an ounce of matter; he felt quite comfortable after this; the arm was put in splints and bandaged, and he was ordered full diet, and a pint of porter daily.

28th. No uneasiness of any kind; openings discharging moderately, but rather too much for the state of his system.

30th. Appears to be doing well.

October 11th. Arm doing well, but he has got cold: ordered a pectoral mixture, of mucilage, antimonial wine, and camphorated tincture of opium.

14th. Cough nearly well; splints and bandage removed; the union is not solid, but it is so far perfect that, when he attempts to raise the arm, the humerus continues in a straight line, as if there was no solution of continuity in the bone; seton removed; a starch bandage applied; splints continued.

November 4th. Doing well; all appears steady.

12th. Splints and bandages were all removed to-day; the continuity was complete, but ossification had not taken place; to hasten this process an effort to excite inflammation was unfortunately had recourse to, by a manipulation of the arm, similar to that of rubbing the broken extremities together: the result was, that on leaving the hospital some time after, which he was obliged to do on domestic business, the firmness at the fractured part had diminished, and the arm was pliant, but it still retained as much firmness as enabled it to resist the action of the muscles, so that he could raise his hand to his head, and direct the motions of the fore-arm pretty well.

About four months after this, I heard he was perfectly well, and was able to dig in his garden; and that he had substituted a glue bandage for that of the starch, and wore it for three months without intermission.

This case establishes the necessity for maintaining absolute rest, and freedom from motion of every kind, in the injured limb in its advance towards a cure. This may, perhaps, be difficult to accomplish; but by the aid of the starch bandage, splints, and making the patient aware of the injury certain to ensue if he does not comply with the prescribed regulations, it will be found to be quite attainable.

The examination of the limb should be conducted with great caution, and never made until the treatment has been far advanced, and an attentive observation of the case confirmed

its safety; when made, if the smallest improvement can be discovered, and the part has become more firm, even in the least degree, nature must be permitted to advance the new process in her own way; for any attempt to expedite it will have a contrary effect, and in numerous instances (particularly when some diseased taint exists in the constitution) most probably destroy it altogether. I do not propose to explain how or where this process originates, what tissues are engaged in it, or how it is carried on; my impression being, that bone, periosteum, arteries, veins, nerves, muscles, absorbents, in short, that each and every organ constituting the limb contributes its portion towards its reorganization; and it was the hope of exciting a simultaneous action in all, without injuring the vitality of any, that first suggested to me the application of the seton in this particular way.

Amongst the many constitutional causes mentioned as obstructions to the bony union of fractures, none stands more prominently forward than scrofula. The following case proves how true this is, at the same time that it gives ample grounds for attributing much efficacy to the action of the seton.

III. *Fracture of the Femur; ligamentous Union for fifteen Months; Seton; Cure.*

William Archer, aged 13, admitted September 6th, 1840. His left femur presents a prominence on the outer side of its upper third; on examination the prominence is found to be caused by the lower portion of the bone projecting, the result of an oblique fracture that occurred fifteen months ago; the broken fragments do not grate together when they are moved, but motion is perfect between them; when they are rotated on each other, the rotation is restrained beyond a certain extent by a bond of union evidently ligamentous: the boy is thin and of spare habit, which enables this to be easily perceived. Extension elongates the limb three-fourths of an inch, and when

he stands with the thigh exposed, the inferior portion of the fractured bone is seen to jerk upwards on the upper fragment. He is of scrofulous temperament, with light hair, light blue eyes, very clear complexion, and enlarged submental and cervical glands. His history is as follows: about fifteen months ago a boy fell on him, and caused a simple fracture of his thigh; he was immediately brought to hospital, and, in the space of nine months, union having taken place, he was dismissed cured. In about five weeks after this, as he was sitting down on his form at school, he suddenly felt the bone as if quite loose, but not painful, until he attempted to walk, when the pain was slight. After seven or eight days the pain subsided entirely, but the leg felt unsteady, and he got a crutch, by the assistance of which he has walked tolerably ever since, except that for the last six weeks he says he thinks the bones have become more loose. His digestion not being in good order, he was ordered some compound infusion of gentian, with sulphate of magnesia.

14th. His general health being much improved, a seton, consisting of a skein of silk, was this day introduced, by pushing a curved seton-needle into the posterior part of the thigh, down to the fractured bone, then turning it outwards round the fractured extremities, so as to compass about two-thirds of their circumference, and to rest as closely as possible in contact with them; it was brought out in front of the thigh. The limb was enveloped in a starch bandage, and placed in the straight position; Dessault's apparatus for fractured thigh was applied; and perfect rest was enjoined. Small holes were left in the bandage, opposite the entrance and exit of the seton.

17th. Complains of pain in the course of the seton; pulse 100; skin hot, and bowels confined. Ordered a saline aperient daily, with calomel and James's Powder at night.

20th. Healthy matter oozes through the openings; the inflammation has nearly disappeared; skin is moist; pulse 70. All his medicines omitted.

28th. The discharge of matter has increased for the last

two days, and he had slight perspiration last night; pulse 90, soft; did not sleep well. The seton was removed, and a scored splint was bound on the front of the thigh, the more effectually to secure absolute rest to the limb.

October 5th. Pulse 60; heat of skin natural; tongue clean; discharge has nearly ceased; appetite good; sleeps well.

20th. Complains very much that the bandage irritates his leg, and prevents him sleeping; the wounds caused by the seton-needle are quite healed; he says he moved his limb in the bed last night, and it felt strong. The bandages and splints were removed to-day, and he was enjoined to keep the limb without motion of any kind.

28th. Sat up in his bed to-day, and says his leg is well; a very cautious examination was made, and the fractured portion appeared to be firm; enjoined perfect rest still.

November 2nd. A strict examination was made to-day, and the union was found to be quite consolidated; he walked for five minutes leaning on the arm of an assistant. Ordered crutches, and to get up daily.

7th. Walked this day for a short time without a crutch; says he is quite well, and wishes to go home. Dismissed.

He has been at the hospital frequently since, and within this month (January, 1846) I have seen him: he has never suffered the slightest inconvenience from the fractured bone since dismissal from hospital in the year 1840; he has perfect use of the limb, and its length is not diminished.

IV. *Fracture of the Patella; ligamentous Union; Seton; Cure. Reported by Mr. R. Gregory.*

Patrick Mac Donnell, aged 24, a healthy-looking man, of spare habit, came to me on the 2nd of November, 1844, unable to walk except with the assistance of a crutch, owing to a kick from a horse he received a fortnight previously on the knee of his right leg. The patella was fractured transversely in its centre, and the fragments were about an inch separate. There was some swelling and inflammation of the joint, with a good deal of

pain extending up the thigh; the inflammation was very acute, but subsided a few days back, and he thought he was getting well, but on attempting to walk he could not, he says, prevent the knee from falling forwards, and he thought it would fall out of the socket, it had become so loose from the injury. He has remained quiet since the accident, but has not had any surgical assistance. I put him into hospital, brought the fragments together, and retained them so; his leg and thigh were laid in a splint that fitted along the back of the limb, and grasped it tightly round the calf of the leg and centre of the thigh; the heel and leg were raised on a plane higher than the thigh: he lay on his back in a state of perfect rest. He remained in this state, closely watched and cared, until the 24th of December, when the bone was examined, and there was found to exist a ligamentous union between the fragments; there was no inflammation present, and the man complained much of the long confinement. On this day I introduced the seton, by pushing a narrow seton-needle through the integuments at the outer margin of the patella, and passing it on in front of that bone immediately over the newly-formed bond of union, and bringing it out on the inner edge of the bone; the seton was left in the course of the needle: the limb had been previously put up in a splint, and the broken bone secured with a bandage, so that it could not be moved. The patient was so tractable, and so anxious to get well, that every suggestion we made to him to keep the joint in a state of perfect rest was anxiously adopted.

January 6th, 1845. Complains of pain in the course of the seton; the integuments of the patella and lateral parts of the joint are inflamed and swelled, but not so much as to oblige me to remove the bandages; his tongue is clean; bowels in good order; pulse 80, and rest not much disturbed. Ordered three grains of James's Powder at night.

10th. Had an uncomfortable feel in the joint; says that pain shoots through it occasionally, from before backwards; there is a good deal of inflammation all over the front of the

joint, and considerable tenderness on slight pressure, particularly in the situation of the bursa of the patella; there is a slight oozing of matter from the openings; pulse 90; skin hotter than natural; bowels confined; some thirst; and did not sleep so well last night. Seton removed, and to have a saline aperient.

11th. Feels easier to-day; the shooting pain is not so frequent; pulse 90; thirst not urgent; skin moist; some matter discharging; bowels were moved three times. Ordered a draught of camphor mixture and antimonial wine at night.

14th. The shooting pains have subsided, but there is still considerable superficial inflammation; the openings are discharging a little, and the discharge has a reddish tinge; the swelling is less, and he can bear gentle pressure on the joint; pulse 86; skin soft; slept these two last nights comfortably; had some starting in the limb that awoke him in the night. Ordered ten drops of black drop at bed hour to-night.

18th. Is going on well; the fever has subsided; the inflammation of the joint is nearly gone; there is a slight appearance of discharge at the openings; he says he feels comfortable.

21st. No complaint; a little discharge from the external opening, the other is healed; has maintained the most perfect rest, and is enjoined to do so still.

24th. Doing well; openings healed; inflammation entirely subsided.

29th. No change; still maintains perfect rest.

February 3rd. Made a movement of the knee last night incautiously, it gave him no pain, and he says he thinks the bone did not move in its centre as formerly; enjoined rest still.

15th. I examined the bone to-day, and there is not the least motion in the seat of fracture; he says he examined it himself two nights ago, and attempted to move one fragment against the other, but could not. He got permission to sit up a little to-day.

16th. Walked in the ward with the support of a stick.

18th. Has used the leg since, and can stand steady without support; says the knee is very stiff, but it is perfectly firm. Ordered a tepid water douche bath to the knee, and the joint to be rubbed gently after it with the hand.

20th. He left hospital yesterday, with the bone firmly united, and the union perfectly solid.

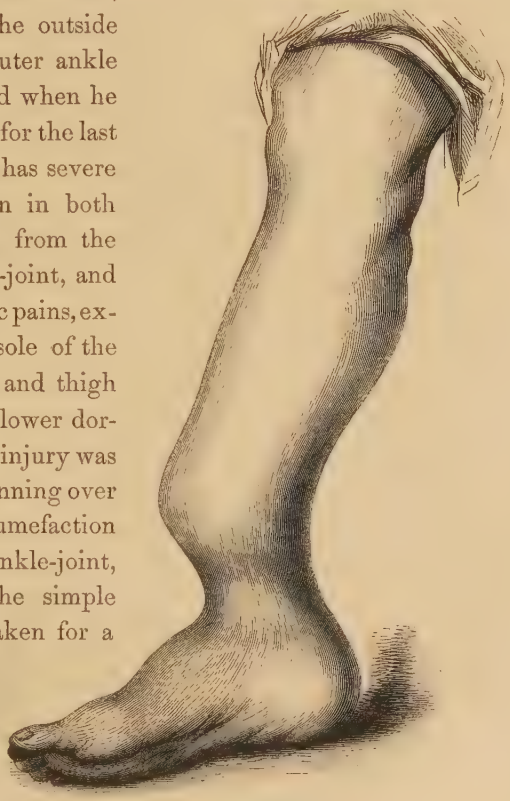
I had an opportunity of seeing this man, and examining the bone, on the 1st of April subsequently: the joint was healthy, and he had very good use of it, and could ride and walk quite well.

If I had to apply the seton in another case I should not allow it to remain for a longer period than perhaps ten days, that time being all that is generally necessary to produce a sufficient degree of inflammatory action in the fractured bone and the parts surrounding it. If the patient complains of pain in the part some days after the introduction of the seton, it is advisable to move it, by drawing it a little from one side to the other, and making gentle pressure along its course, as by this manipulation matter will get free discharge, and the pain be greatly tranquillized. It is most desirable to retain the starch bandage from the time the seton is introduced, and to avoid removing it for as long a period as it may be reasonably supposed the bone will require to become firm and united; this period depending on the bone that is broken, as some bones naturally require a longer time than others,—on the constitution of the patient, whether it be weakly, and tainted by disease, or vigorous and healthy,—on the age,—and on the directions prescribed being strictly adhered to. Circumstances may occur to oblige us to remove the starch bandage; if so, it should be done, if possible, without moving the fractured portions of bone, and it ought to be applied again as soon as may be.

I will not advance anything further in recommendation of the seton, as I consider its results in the foregoing cases sufficiently satisfactory to authorize its application in others of this class of injuries.

Case of badly united Fracture; Resection of Portions of the Bones; perfect Recovery without Deformity.

Andrew Redmond, aged 28, admitted 6th of July, 1841. Is unable to walk without great exertion and the use of a crutch, from an injury received three years ago. His right leg, as exhibited in the accompanying illustration(*a*), is bowed outwards at its lower third, so much so that the outside of the foot and outer ankle rest on the ground when he attempts to walk; for the last twelve months he has severe and constant pain in both bones of the leg, from the ankle to the knee-joint, and excessive neuralgic pains, extending from the sole of the foot along the leg and thigh to the lumbar and lower dorsal vertebræ. The injury was caused by a car running over the limb. Great tumefaction ensued in the ankle-joint, foot, and leg: the simple fracture was mistaken for a dislocation, treated as such, and both bones united firmly in the position above described. He is most anxious to have the deformity removed, and the use of the limb restored, at any hazard; or, if this can-



(*a*) There is a preparation in the King's College museum exhibiting the form of false joint exactly in the same position. See Druitt's "Surgeon's Vade Mecum," fourth ed. p. 230.

not be accomplished, he wishes the limb to be amputated, as it is useless to him, and the pain intolerable.

July 15th. With the hope of remedying those evils, I performed the following operation. Having placed him on a table, with the foot of the affected limb resting on it, and the leg flexed, I made an incision four inches in length, commencing two inches above the deformity, parallel to and behind the posterior edge of the fibula; this incision severed the connexions of the soft parts with the bone in this direction; a similar incision was made along the posterior edge of the tibia. Those incisions were connected inferiorly by a transvere one in front, passing through the skin and integuments; the portion thus incised was dissected up and formed a flap, which, being raised, exposed completely the deformed bones; a chain saw was then passed round the fibula, keeping close to it, in order to avoid the vessels, and the bone was sawed through above the deformed part, then below it in a similar manner; the piece was firmly attached to the angular portion of the tibia, and so not easily removed; the deformed portion of the tibia was removed in a similar manner. The limb was then placed straight, the extremities of the bones in apposition; the flap was drawn down, it covered the whole wound, and was united by a few points of suture; the limb was then placed in a case prepared for it, and the man put to bed: there was not a blood-vessel divided, nor was there an ounce of blood lost. This wood-cut exhibits the appearance of the portions of the removed bone.

Nine o'clock, P. M.—Has been pretty easy, but is much depressed; pulse 55, and small: ordered thirty drops of tincture of opium, and twenty-five of spiritus ammoniæ, in mint water.

July 16th. Nine o'clock, A. M.—Says he is pretty well; slept a little; looks fatigued; pulse 70, stronger, and more full; no complaint of the leg. Ordered tea, and an opiate at night.

17th. Complains of shooting pain in the wound; in other respects he is better: ordered a spirit lotion to the leg. Three of the sutures were removed. Opiate at night continued.

19th. The leg is a little inflamed round the wound; pulse 100; did not sleep well last night; is a little sick in his stomach. All the sutures removed: to have an aperient of compound infusion of roses, and sulphate magnesia; omit his opiate.

21st. Is much better to-day, bowels moved twice; pulse 80; slept without an opiate; to have mutton-broth for dinner.

23rd. Does not look well to-day; face a little flushed; pulse 100; tongue white and dry; is thirsty; has no pain anywhere; wound is suppurating a little, and the matter looks healthy. Ordered one grain of blue pill, and two of James's powder, every three hours; the effervescing mixture *ad libitum;* no broth.

24th. Feels better; skin moist; pulse 80; tongue cleaner; wound suppurating freely; the bowels were moved four times in the night. Omit his medicine, except the effervescing mixture.

26th. Doing well; a light bread and water poultice to be laid over the wound; to have broth, tea, and flummery.

30th. Doing well; part of the wound is healed, the rest is suppurating; food as usual.

August 2nd. Complains of great pain in his heel; the suppuration is very profuse; pulse 100, soft and small; perspired a great deal in the night over his face, neck, and arms; a slight hectic on left cheek; says he is very tired.

Ordered: Compound infusion of roses, with sulphate of magnesia, sulphate of quinine, and dilute sulphuric acid, thrice daily. A pad, hollowed in the centre, was placed under the heel.

5th. Much improved in appearance; pulse 70; perspirations on the face only; appetite good. Ordered a little broiled

meat for dinner, and a small glass of porter; his bowels are a little too free to-day. Omit his medicine.

8th. Felt quite comfortable since last report, until two o'clock this morning, when he became suddenly sick in his stomach and began to shiver; the shivering lasted for half an hour; his skin is now hot; face flushed; pulse 120; has had some startings in the leg; there is an erysipelatous blush round the wound and a little up the leg; discharge is scanty, thin, and glairy: the edges of the wound are puffed and glassy-looking; the flap is engaged in the inflammation. The wound was closely examined; there is not any deposition of matter. Ordered a grain of calomel and two of James's powders every third hour. Omit his meat and porter. Complains of intolerable pain in his heel, to which a piece of lint, kept wet with a solution of oxymuriate of mercury in spirits of wine and laudanum, has been applied.

9th. The erysipelas has extended to the knee, quite round the leg; the flap is of a dusky red colour, swelled and tense; the wound is dry; he complains of pain and starting in the leg; the starting frightens him so much that he fears to sleep; the bones are evidently quite moveable; he is very low; his countenance looks sallow, and has a greasy perspiration on it; his eye is languid; says he is tired; pulse 100, small and intermitting; slight nausea; bowels were moved twice in the night; tongue brown in the centre, but not very dry. Ordered the decoction of bark in a state of effervescence, an ounce every fourth hour. To have porter when he wishes for it; a vapour stupe to the leg, and the sound part adjoining the erysipelatous portion to be pencilled over with nitrate of silver; a person to remain beside the bed with his hand resting on the limb to control the starting; to have ten drops of black drop at night. The calomel and James's Powders were omitted at eleven o'clock last night.

10th. Much as yesterday; raves a good deal; mortification

has set in along the line of the incision, and the united part is separating. To continue his medicines, and have a glass of port wine occasionally; the fermenting poultice to be laid on the wound. As the larvæ of the house-fly appeared under the limb, the sides of the case were painted over with spirits of turpentine to destroy them. A blister to be applied to the region of the stomach for two hours.

11th. Is much sunken in appearance; tongue dry, brown in centre, edges red; pulse 100, very small and intermitting; a cold dampness on his skin; the mortification engages the greater part of the flap, and the lower margin of the wound looks sloughy; the nausea has ceased; has retention of urine. Erysipelas not extending, it has vesicated in a few spots; no starting of the limb. An ounce of the ammoniated tincture of bark every six hours.

Ten o'clock, P. M.—Feels a little better; pulse 110, and more regular; says he is so tired he cannot sleep; 40 drops of tincture of opium were given him in a wine-glass of port wine.

12th. Slept from half-past ten o'clock last night to six this morning; says he feels better; pulse 120, and regular; tongue brown and rough, with a slight appearance of moisture over its centre; the flap is sloughing. To continue his medicines.

Ten o'clock, P. M.—No change; his laudanum in the wine as last ordered.

13th. Slept well for seven hours; pulse 120, full; tongue not so brown, and more moist; bowels not moved since yesterday morning, at four o'clock, A. M. To have ten grains of compound colocynth extract, with one of capsicum immediately, and, as soon as his bowels are moved, to continue his other medicines. Repeat his wine and laudanum.

14th. Is decidedly better; bowels moved twice; has a little headach; omit his wine and bark, and repeat his aperient pills. To have some porter.

15th. Slept well; looks very much better; pulse 100, and regular; tongue cleaning and moist; a portion of the flap has

sloughed off, and exposed the bones beneath it; about the twelfth of an inch of the tibia, at its upper cut extremity, looks dry, and void of periosteum, as if it would exfoliate; there is a profuse fœtid discharge, but no pain. I raised the limb from the box, and the back of the leg was dry and clean, but red from the pressure, and the cuticle scaling off from the erysipelas; the heel has not pained him since the use of the oxymuriate lotion. Ordered a thick fold of lint, steeped in the solution, to be laid all along the bottom of the box, and the limb placed on it. To continue his porter; to have some beef-tea, and his black drop at night; lint, wet with the chloride of lime lotion, to be kept on the leg.

16th. Still improving; to have broiled meat and wine and water to-day; his black drop at night.

19th. Has gone on gradually improving; eats, drinks, and sleeps pretty well; is very weak; the wound is suppurating freely. Ordered one grain and a half of quinine, and ten drops of diluted sulphuric acid; porter and meat daily.

25th. He is now considerably improved in health; the discharge is profuse, and granulations are appearing on the fibula; his pulse is 90, and he is greatly emaciated; he complains of the protracted confinement, and is beginning to despond; longs for his home. Ordered light nutritious diet and tonics.

September 1st. He is not cheery, and these last two days feels very weak, and has had perspirations in the morning over the upper part of his body; the hectic flush is on his cheek, his pulse is 100, and the discharge profuse; the fibula is granulating, and so is the tibia, above the exfoliating part; the lower extremities of the bones are invisible, as the soft parts have granulated over them; he is so restless that it is almost impossible to keep the bones *in situ*. Under all these circumstances I had a consultation this morning, and the result was, to propose amputation as the best chance of preserving his life.

5th. I told him to-day the decision we had come to: he

asked me to "wait a little, if I was not already tired of him." This accorded so well with the feeling of intense interest I had for the poor fellow, that I readily assented to his request, and did not urge the matter. Ordered to continue his diet and tonics, and his body to be sponged over, night and morning, with tepid vinegar and water.

18th. No great change since last report. He objects to take his medicines. Pulse 120. He is greatly emaciated; discharge not so profuse, and wound granulating; extremity of tibia visible, it protrudes up through the granulations. Ordered two drachms of powdered Cinchona bark in a pint of porter twice in the day.

October 1st. Nothing particularly interesting has occurred up to this day. He has been struggling on, living on tonics, wine, porter, and occasionally a little meat. To-day I find a bit of the tibia is moveable. I felt it with a probe at the posterior part of the bone; it is very deep, for the soft parts have formed well and firmly in the situation of the flap. He is a little irritable, and begs me to leave him alone to-day. Ordered a five-grain calomel pill to-night, and a saline aperient in the morning; a linseed-meal poultice to the wound.

5th. I removed a very small bit of bone to-day from the front of the tibia; it was loose, and came away in the forceps; and the deep-seated portion came away also; it was from the back of the tibia. About an ounce of florid-coloured blood followed the removal of the latter, but it was checked by pressing the popliteal artery steadily for about ten minutes. He is very faint and irritable. I gave him twenty drops of acetum opii in a glass of porter, and ordered him to be kept perfectly quiet; a fold of lint, wet with the spirit wash, to be kept on the wound.

10 o'clock, P. M. Slept all day, and says he was not so well these two months as he is to-night; no appearance of hæmorrhage in the wound. To continue the spirit wash, and give him some tea.

20th. Going on well; no cavity in the wound; it presents a surface of granulations; discharge diminished; complains of a very sore spot on his back; the soft parts on the sacrum are red, and very painful. Ordered the oxymuriate of mercury solution to be applied to it; he is to be raised up, and to sit supported by a bed-chair.

November 1st. His health is very much improved, his appetite good; wound looks healthy; the limb is becoming more firm; there appears to be a general regeneration of all the parts: it is still kept in the case, and every attention paid to keep it straight, in a state of perfect rest, dry, and clean.

20th. Complains of pain over the fibula, about an inch above where it was sawed; it is slightly inflamed, and the parts a little elevated; in other respects doing well. Ordered a linseed-meal poultice to the painful part.

December 3rd. There is a small abscess over the fibula at the painful part. I opened it to-day, and found a small spicula of bone in it. Ordered to continue the poultice.

20th. Doing well, and if he moves the limb in changing his position in bed, the motion of the foot corresponds with the motion of the knee; his ankle-joint is perfectly stiff.

January 5th. The wound is not healed. The limb appeared so firm to-day that I commenced moving the foot at the ankle-joint; it gave him excessive pain. I placed the limb on the inclined plane, and applied a splint to each side of the leg; the knee is very stiff and painful in motion.

7th. The leg and thigh are firmly bound on the inclined plane, the inclination of which is ordered to be altered several times in the day, so as to give motion to the knee; the foot to be moved frequently on the ankle-joint, but not by a rotatory movement.

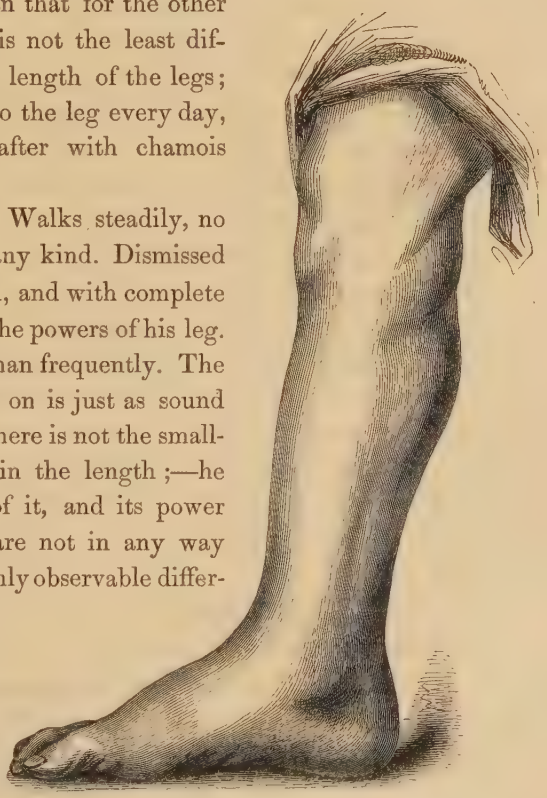
February 1st. Every apparatus removed from the limb to-day; the wound is healed; the motions of knee and ankle-joints much improved, and he raised the leg half a foot from the bed

by its own muscular power; the inclined plane, splints, &c., were all replaced, and the leg bandaged from the toes to the knee.

20th. The limb is now quite firm; the apparatus all removed; a bandage continued on, and the foot to be suspended by a broad strap from his neck; to go about with crutches.

March 1st. Walks pretty well with the aid of a crutch and a stick.

20th. Has dismissed his crutch and sling; walks steady and well; the shoe for this foot to be made with a broad heel, but not higher than that for the other foot, as there is not the least difference in the length of the legs; a cold *douche* to the leg every day, and friction after with chamois leather.



April 5th. Walks steadily, no complaint of any kind. Dismissed perfectly cured, and with complete restoration of the powers of his leg.

I see this man frequently. The leg I operated on is just as sound as the other; there is not the smallest difference in the length;—he has full use of it, and its power and strength are not in any way lessened; the only observable difference is, a slight prominence on the tibia from the deposition of the new bony matter.

The accompanying wood-cut faithfully represents the present appearance of Redmond's leg.

Art. VIII.—*Contributions to Midwifery*, No. VI.—*Cases of Retroflexion of the Uterus successfully treated.* By Thomas Edward Beatty, M.D., M.R.I.A., Professor of Midwifery to the Royal College of Surgeons in Ireland, Physician to the City of Dublin Hospital, &c.

[Communicated to the Obstetrical Society.]

Dr. Ashwell's valuable Treatise on the Diseases peculiar to Women contains the following passage(*a*): "There is no doubt in the profession about the existence of procidentia, inversion, and retroversion of the uterus; but there are many practitioners who question whether the uterus is ever anteverted, anteflexed, or retroflexed. It is true that these states sometimes require nice diagnosis; that they are exceedingly uncommon; that in slight and even more marked degree, they may exist undetected; that they are rarely productive of serious symptoms; and that perhaps in few instances can they be said to have caused death; but still they exist; it is therefore important that they should be fully described."

The opinion expressed in the above passage has led me to communicate the following cases of retroflexion, an accident which is rare in occurrence, and produces a train of very distressing symptoms, many of them attendants upon other and various diseases of the pelvic viscera, but which, taken together, form a group sufficiently characteristic of this displacement of the uterus.

The first notice of this affection is to be found in Dr. Denman's Introduction to Midwifery(*b*). "Another complaint similar to that of which we have been speaking, and which has been called a retroflexion of the uterus, has occurred in practice. By this term is implied such an alteration in the position in the parts of the uterus that the fundus is turned

(*a*) Page 587. (*b*) Page 78, sixth edition.

downwards and backwards, between the rectum and vagina, whilst the os uteri remains in its natural situation; an alteration which can only be produced by the curvature or bending of the uterus in the middle, and in one particular state, that is, before it is properly contracted when a woman has been delivered. A suppression of urine existing at the time of delivery, and continuing unrelieved afterwards, was the cause of the retroflexion of the uterus in the single case of the kind of which I have been informed by Dr. Thomas Cooper, and the symptoms were like those which were occasioned by the retroversion. When the urine was drawn off by the catheter, which was introduced without difficulty, the fundus of the uterus was easily replaced by raising it above the projection of the sacrum, in the manner advised in the retroversion, and it occasioned no further trouble." This is the whole of Dr. Denman's observations upon this subject. He had never met with the displacement himself, but had its description from another, to whom it presented itself in a very recent form, and in which instance, for that reason, the malposition was easily restored.

The part of the uterus at which this deflection takes place is that at which the neck and body of the organ join, and the angle at which the body is bent upon the neck varies, being sometimes very acute, and at others more obtuse. The displacement is most commonly the result of pregnancy; it could scarcely, if at all, occur during gestation, owing to the fulness and tension of the uterus during that state, but in all the instances that have come within my knowledge, or that I find recorded, the occurrence of the accident was subsequent to delivery. Velpeau(*a*) saw fifteen cases in which it occurred in the unimpregnated uterus, but after parturition. Dr. Davis(*b*) is of opinion that this incurvation may have occurred congenitally, as the effect of an originally imperfect development, or as a result of disease, either of the uterus itself, or of the organs

(*a*) *De l'Art des Accouchemens,* Bruxelles, p. 522.
(*b*) Obstetric Medicine, p. 589.

in immediate contiguity to it; but he gives no cases of either kind. This displacement is very different from retroversion, in which the os and cervix uteri are thrown upwards; whereas in retroflexion, these parts maintain their natural position, while the fundus is thrown downwards. Retroversion takes place when the uterus is distended by pregnancy. Retroflexion is peculiar to the unimpregnated uterus subsequent to delivery. They also differ in the nature and amount of the consequences that attend them; one, retroversion, involving the safety of the patient to a great degree, while the other is only productive of distressing local symptoms, not indicative of, or followed by danger. The only case of death with which I am acquainted is one recorded by Velpeau(*a*), in which the patient died at the end of fifteen years of insurmountable constipation.

The time at which this displacement takes place is most probably immediately after delivery, when the uterus is still large, but soft and pliable; it is, however, most likely to be overlooked at the time of its occurrence, because the very urgent symptoms do not manifest themselves until the woman rises from her bed, and resumes her usual occupations in the upright posture; then it is that gravity causes the pressure to be felt by the surrounding viscera, and the symptoms declare the nature of the malady. But it unfortunately happens, that often these sensations are endured for a long time without complaint, in the hope that they will subside as the woman regains her strength. The organ, by this delay, becomes fixed in its unnatural position; a certain amount of chronic inflammation alters its tissue, and moulds it into its new shape, rendering all attempts at restoration, by mechanical means alone, fruitless; and a case, which, if discovered in time, might have been easily remedied, becomes most obstinate. The case related by Dr. Denman, already quoted, describes the symptoms and appropriate treatment of retroflexion in its recent state; the cases that follow shew the displacement in its more common

(*a*) *Loc. cit.*

or chronic form. We should form a more favourable prognosis in recent cases, on account of the greater ease with which they can be rectified. The means to be adopted are those we employ to restore a retroverted uterus; and after the organ has been placed in its proper position, great care should be taken to keep the patient lying as much as possible on her face, until the uterus has shrunk to its original size.

Dr. Davis is of opinion, that cases of chronic deflections are to be considered as totally incurable by any efforts of art exclusively, without the aid of nature, as exerted during the changes and developments which are the special attributes of pregnancy. A similar opinion is entertained by many practitioners, and such will be most likely the case with all who confine their efforts at cure to mechanical means alone. The altered condition of the tissue and texture, as well as of the shape, of the uterus, must be attended to; and the chronic inflammation, which is the effect of the alteration in shape, and the cause of alteration in tissue, must be combated by appropriate treatment, before we can expect success in our attempts to restore the organ to its natural shape. Upon this theory the treatment of the following cases was founded:

Case I.—A. M., aged 30, has had six children; complains of severe dragging pain in the loins, groins, and back, aggravated by walking or making any violent effort. She has considerable pain and difficulty in defæcation, and, during the attempt, she has the sensation of something blocking up the passage, and preventing the exit of the contents of the bowels. She has a good deal of irritability of the bladder, which causes her to rise frequently at night in order to relieve that organ. She states the menstrual function to be pretty regular as to time, but variable in quantity, and always accompanied with much pain; and she labours under rather profuse leucorrhœa during the intervals. On making a vaginal examination I found the os uteri occupying nearly its usual position, perhaps a little more inclined towards the pubes than natural: it was

enlarged, and tender to the touch. On carrying the finger along the back of the cervix, it soon encountered a prominent tumour, pressing the posterior wall of the vagina downwards and forwards, and evidently connected with the upper part of the cervix uteri, with which it made an acute angle, into which the finger could sink. On exploring the rectum, this round and hard tumour was found pressing into its cavity from before, and blocking up the area of the bowel. An examination of the os uteri, through the speculum vaginæ, disclosed that part of the organ swollen and congested, and superficially ulcerated. The patient dated her present state of suffering from a bad confinement of twins, which took place four years previously, and since which she has never felt well. She was a confidential servant in the nursery of a lady who had four young children, and she was, consequently, a great part of the day on her feet, and had to carry one of the children in her arms whilst out for their daily airing. This greatly increased her suffering, and at last her mistress applied to me about her, when I took her into the City of Dublin Hospital. I confined her closely to bed, and endeavoured to reduce the chronic inflammation with which the uterus was evidently affected. This was accomplished by means of leeching the os uteri, the warm hip-bath, mercury, and the injection into the vagina of plain warm water. Under this treatment the pain and uneasiness subsided. The ulceration was then attended to, and, by the application of a strong solution of nitrate of silver, it was gradually healed. No attempt had been made to restore the uterus to its original condition previous to the removal of the swelling and inflammation of the organ; for I was of opinion, that any force exercised in order to reduce the displacement, while such an unhealthy state continued, would only tend to produce further inflammation, while it would, most likely, fail in accomplishing what was intended. I was pleased to find, that as the size and painful condition of the uterus were lessened, the displacement of the fundus became less and less apparent, and at last, at the

expiration of three months from the date of her admission, the organ could be pushed fairly into the upright position without inducing much pain. There was, however, still a tendency to fall back whenever the patient stood or walked for any length of time. This was remedied by the use of a sponge pessary, with which she was furnished, and she finally returned to her master's house, where she is now employed in her former occupation of nursery-maid.

Case II.—Mrs. T., a small, thin, delicate-looking lady, who I had attended in her two confinements, the last of which took place in September, 1842, consulted me in November, 1844, on account of very distressing symptoms, under which she had now laboured for many months. She complained of inability to walk, owing to the weight and dragging sensation experienced in the pelvis and loins. She also stated that there was a constant tenesmus, but, at the same time, a great difficulty in passing the contents of the bowels; and that, when the effort was made, it was constantly accompanied by a most violent pain in the epigastric region, compared to a tearing of the bowels from their proper place. She suffered from menorrhagia and leucorrhœa to a considerable degree, and was greatly worn down and emaciated.

A vaginal examination disclosed the cause of all her suffering. The uterus was found to be retroflexed, the fundus dipping down between the vagina and rectum, while the cervix maintained its usual position. Congestion and ulceration of the os uteri were present in this, as in the former case. This lady was not aware of any sudden invasion of her present malady, but stated that the symptoms had come on gradually, having commenced a few months after her last confinement. At that time she had had profuse uterine hæmorrhage, which required the most energetic measures for its restraint,—amongst others, strong and continued pressure upon the uterus; and, in reflecting upon her case, the question has arisen in my mind, whether such pressure, in a very thin woman, with a

very shallow pelvis, might not have contributed to the production of the present displacement. However that may be, more than two years elapsed between that confinement and my being called again to see her.

The horizontal position was strictly enjoined, with directions to lie as much on the face as possible; and, as great benefit had resulted, in the former case, from the local abstraction of blood, I applied a few leeches to the os uteri in this likewise. This was productive of a most serious result, for the leeches had scarcely dropped off, when the most violent flooding I ever saw, even in parturition, came on, and which I found it impossible to restrain without plugging the vagina very firmly and closely. The plug was removed the following day, and no further bleeding took place. The blood must have come from the cavity of the uterus, for the leech-bites could not have furnished the quantity that rushed from the vagina.

The ulcer on the os uteri was healed by the application of nitrate of silver and the injection of saturnine wash, and various attempts were made to restore the uterus to its proper position. It, however, seemed to be permanently fixed in its unnatural position, not owing to the resistance of any part of the pelvis, or to the existence of adhesions, for the whole organ could be freely moved up and down in its cavity, but by the parts having become accustomed to their new condition, and having grown in that position. Sponge, and globular wood pessaries were tried, with various results. At one time I made an effort to pass the uterine sound into the cavity of the uterus, in the hope of being able to elevate the fundus by that means, but the acuteness of the angle formed between the body and cervix formed an insuperable barrier to that manœuvre. A ring pessary of boxwood was found to give the greatest relief and support; and, after a confinement of two months to bed, she was able to go about with comparative ease. The bowels continued, as they had been all along, very costive, and she made use of the enema syringe daily with good effect. I had a confident

hope that, if she became pregnant again, a permanent cure of the displacement would be effected, provided that abortion did not occur, a circumstance very likely to happen, from the unnatural condition of the uterus.

I was well pleased to learn in the beginning of the year 1846, that my patient imagined herself with child, and in a short time it became manifest that she was so. Every precaution was adopted to guard against miscarriage, and happily with good effect, for the pregnancy went on without any unfavourable occurrence, and the lady's health and local symptoms improved as it progressed. She was finally delivered of a healthy child on the 6th of October, 1846.

Having been warned of her disposition to uterine hæmorrhage by what had occurred in her former confinement, and after the application of leeches, I took the precaution of giving her the ergot of rye, in the manner and at the time described in my former communication in this Journal, and she escaped without any loss on this occasion. She had been previously informed of my intention to keep her a long time in bed after her recovery, and she submitted to an imprisonment of two months with readiness. At the end of that time she was allowed to lie on a sofa, with liberty to sit up to her meals, and at last to walk quietly about her chamber. I examined the condition of the uterus at this period, and was gratified by finding it in its natural position. She was now allowed free liberty through the house; she is still nursing her infant, is free from all her former delicacy and uneasiness, and has grown fat.

Case III.—I was consulted, for the first time, by a lady, aged forty-three years, the mother of several children. She stated that she had several miscarriages of late, between the third and fourth months of pregnancy, and was now apprehensive of a similar occurrence, as she was very near her usual time of abortion. She said she had suffered for a long period from great debility, and weight about the pelvis, and that

there was a remarkable protrusion into the vagina whenever she went to stool, giving her the idea that a large lump of fæces was arrested in the rectum, and was forced forwards by the effort to relieve the bowel. This prevailed to such an extent that she was compelled to apply her fingers to the part, and press the tumour backwards and upwards, when, as she imagined, the fæces took their proper direction, and a sufficient stool was passed. She had leucorrhœa to a considerable extent, occasionally tinged with blood, but no urinary distress.

I suspected the nature of the case, and an examination verified the diagnosis of retroflexion of the uterus, with ulceration of the os uteri. The organ was enlarged, perfectly moveable in the pelvis, but no reasonable amount of force could restore it to its natural position. Symptoms of abortion, as she anticipated, soon set in, and a fœtus of three months was expelled. The uterus now diminished in size, but still held its contorted position, and the same distress in defacation continued.

Attention was now paid to the ulceration of the os uteri, which healed rapidly under the caustic treatment, and she was instructed in the manner of using the sponge pessary made by enveloping a piece of sponge of a suitable size in a covering of oiled silk, fitting it loosely. A pessary thus prepared can be introduced with great ease by a patient, and removed by a piece of tape attached to the sponge. She was by this means enabled to resume her former position as mistress of her house, which she had been compelled to relinquish for a long time before; but she was unwilling to submit to the prolonged confinement to the horizontal position, and the application of leeches to the os uteri, which I informed her would be necessary in order to effect a complete cure.

This case, for the reason just stated, did not terminate as favourably as the other two; but it is interesting, as furnishing an instance of pregnancy occurring during displacement, and abortion being the consequence. If the habit of abortion had

not been established previous to my seeing the patient, there would have been a greater probability of gestation proceeding to the full period, when the displacement of the uterus would have been rectified.

In conclusion I would observe, that it is not unlikely these cases are more common than it is imagined; that the diagnosis from the symptoms, and from an examination by the vagina and rectum is not difficult; and that much benefit can be obtained by attention to the pathological condition of the uterus.

Art. IX.—*Practical Observations upon Pendulous Tumours; with Cases and Illustrations.* By J. M. O'Ferrall, M.D., M.R.I.A., &c., First Medical Adviser to St. Vincent's Hospital.

Pendulous tumours are met with in different regions of the body. Their nature may, like that of other tumours, be analogous to the tissues called normal, or it may be foreign to the organization. Thus far they admit of an arrangement in common with other growths to which the term *tumour* has been applied. They possess, however, some characters peculiar to themselves, and which, I believe, will render them sufficiently interesting as a subject of separate study. These characters depend partly on their peculiar form, their pendulous position, and the nature of their attachment, and, in a great degree, on the organization and functions of the part from which they spring.

There are other characters of pendulous tumours developed during their progress, and depending on certain morbid changes to which, in their nature, they are exposed, and which not unfrequently lead to groundless apprehension of their malignancy.

As this class of tumours has not been, as far as I know, separately investigated, and as the works of Abernethy, Bell, Lawrence, Vogel, Rayer, Alibert, and Warren, contain no more

special notice of them than is included in the description of a single variety (molluscum), I am induced to bring together a few of the most remarkable instances with which I have become acquainted in practice; and shall premise such general remarks only as may give an interest to their perusal.

The pendulous tumours which are found internally, and which have coverings derived from the serous or mucous membranes, have received more attention from pathologists. Much valuable information on the subject of their anatomy will be found in the works of Dr. Hodgkin; while the practical relations of the polypi of mucous passages are supplied by the best works on the diseases of the passages in which they are found. It is to those which originate in the dermoid, or subcutaneous areolar tissue, that the present inquiry will be confined.

ANATOMICAL CHARACTERS.

Of their anatomical characters, some are common to all tumours of this class, while others are peculiar to the situation of the morbid growth. A prolongation of the common integument, forming the pedicle, is expanded over the tumour, and is here either equal and smooth, or irregular and warty, according to the organization of the locality. The length of the pedicle is various: it appears to be, in a great measure, determined by the size and weight of the tumour; but the apparent length is deceptive, and is often much greater than the reality. This arises from the traction to which the skin surrounding the growth is subjected. The correction is easily made by poising the tumour on the hand. The skin immediately recovers its natural situation, and the actual length of the pedicle is seen. It will be observed hereafter that, in operating in these cases, it is desirable to establish this point, in order to avoid a cicatrix unnecessarily large.

Their colour and consistence depends in a great measure upon their internal organization. The organization of pendulous tumours is best seen in the larger varieties. A section of

the tumour and pedicle exposes the vascular arrangement, which is simple. When the pedicle is narrow, an artery and accompanying vein occupy a considerable portion of the thickness of the neck, and distribute branches through the bulbous portion of the mass. The artery is sometimes so large as to yield a pulsation equal to that of the radial of a child. The ramifications are extremely minute, and do not, as far as my experiments have gone, admit of very satisfactory demonstration by injection. It is difficult to accomplish the injection of the vessel, for the contraction of the skin, when the part is removed from the body, suddenly diminishes the volume of the tumour in a remarkable degree, and expresses the liquid contents of its cellular tissue. The pedicle which before operation was, perhaps, four inches long, becomes instantly shortened to an inch and a half or two inches, and recedes upon the surface of the tumour.

The vein is a simple cylinder, its radicles being, like the branches of the artery, exceedingly minute. I have examined these tubes carefully, but never could detect any structure analogous to valves. This is worthy of observation, as connected with the tendency to œdema and lividity which those productions, when of any considerable size, invariably exhibit. The circulation is less simple in the adipose variety of tumour. The pendulous nævus may also be supplied by more than one vessel. The same may be true of the pendulous tumour which has become malignant; but the arrangement will be found to depend on the breadth of its attachment to the surrounding parts.

The general appearance of the section of pendulous tumours is that of areolar tissue, more or less hypertrophied, and containing in its meshes a limpid secretion. The whole has a pearly or whitish semi-transparent appearance, when of the simplest kind. In the living state this section would, no doubt, be more or less vascular, and present a very different hue. The granulations which spring from these tumours, when

the skin has given way, have invariably the red, fleshy tint of a highly organized part.

To the tissues already named, and which constitute the simplest form of pendulous tumour, may be added others, which give it a special character. Thus the cellular tissue may contain adipose substance in quantity sufficient to give it the character of a fatty tumour. I have seen several examples of this kind, and shall relate the particulars of the most remarkable instances further on. The cellular tissue may be occasionally the basis of an accidental erectile formation. The tumour in such cases has the uneven purple colour of the nævus, and is capable of great reduction in its volume when compressed between the fingers. A section of these tumours shews the numerous apertures of vessels divided in different directions with respect to their axes.

When a tumour of the pendulous kind grows from the nipple or areola of the female breast, it will be found to include some elements peculiar to the part. The glandular follicles descend with the tumour as it grows, and form a part of its structure. These follicles become hypertrophied, and add to the volume of the growth. The growth of tumours springing from the areola is more rapid than that of others in the neighbouring portions of the female breast. I have not seen any pendulous tumour in the latter situations as large as those which are productions of the areola. I was consulted, last summer, by a lady from Clonmel: she had two pendulous tumours on the right mamma; both were, according to her account, on the part as long as she could remember. One was about the size of a small pea, soft, without colour, and suspended by a pedicle of extreme tenuity, growing from a point two inches distant from the nipple. The other was as large as a chesnut, brown in colour, and slightly irregular in its surface. The pedicle of the latter was thicker, and grew from the areola, quite close to the nipple.

The presence of the glandular and sebaceous follicles in

these tumours imparts to them other characters peculiar to themselves. Their surface becomes irregular; they are bedewed with a secretion which acquires a peculiarly fœtid odour if allowed to accumulate. Patients are so much afraid to touch or irritate these tumours, that the secretion alluded to is permitted to concrete on the surface, and form a kind of incrustation.

When the surface of the tumour is irregular, and when the hypertrophy of the follicles causes them to project, the whole assumes a warty appearance, each projection being coated by the concretion already mentioned, in quantity, slowly, but constantly, increasing, until it assumes an appearance resembling icthyosis. These verrucous projections can be separated to the depth of two or three lines, the cleft being found moist, and emitting an offensive exhalation.

A section of a tumour of this description exhibits a remarkable lactescent whiteness in every part except at its margin, where the warty-looking prominences are found. This milky colour contrasts strongly with that of the simpler productions from other parts of the breast.

It is unnecessary to enter into a description of the pendulous tumour, in which malignant deposit has been formed. It is recognised by the same characters in every situation. I may, however, remark, that I have met but one variety of malignant growth (the encephaloid) in these tumours. I have not yet seen in them the schirroma, or hard variety of cancer.

MORBID ALTERATIONS IN PENDULOUS TUMOURS.

Pendulous tumours, nourished according to the same general laws which preside over other portions of the organism, are, like them, susceptible of the same morbid changes. Some of those changes seem to depend on the retardation of the circulation within the tumour, occasioned by their depending position. The arterial supply, by which its growth is promoted, increases with the volume of the tumour itself. There is no

impediment to its free ingress and diffusion through the mass. It is different with the returning current through the veins. There is not, as I have already remarked, any trace of that provision by which the venous circulation is supported against gravity in other parts. The enlargement of the tumour is thus accompanied by a disposition to congestion. The capillaries of both systems become dilated, and the surface acquires a purplish tint, in some places inclining to the arterial, in others to the venous hue.

Some increase of solidity is generally added to the other characters of the tumour at this period. This *induration* of the cellular tissue and skin is irregularly disposed, and (if the tumour be large) gives the surface an uneven figure, which may excite suspicions of a malignant taint. It is proper to mention this morbid change, although the experienced practitioner will have no difficulty in distinguishing, by the touch, the hardening here alluded to, from any more formidable degeneration.

Œdema of pendulous tumours is another condition to which the capillary congestion almost inevitably leads. The surface of the most depending part gives a doughy sensation to the finger; and this infiltration of the cellular tissue is occasionally so great as to deceive the inexperienced, and lead to the opinion that matter has formed in the part. If the cellular membrane be of what is termed loose texture, this mistake is more likely to occur. I saw a lady some time ago, with a pendulous tumour growing from the right labium; it was the size of a large orange, and had a pedicle four inches in length. The bottom of the tumour was discoloured, and had the mark of a lancet puncture, made by a practitioner the day before, with the view of giving exit to matter. Nothing but serum, mixed with a little blood, had escaped. The tumour was removed at once, and no further accident occurred.

Suppuration will, however, take place in pendulous tumours exposed to much friction or injury. A gentleman consulted me on account of a tumour growing from the right natis, close

to the transverse fold. The pedicle was broad, and about an inch long, consisting of the surrounding integument, drawn down by the weight of the tumour. The fundus of the tumour had a small opening, through which pure pus was constantly oozing; a probe passed into this aperture could be made to move freely in a cavity an inch in depth. The remainder of the tumour was palpably of the adipose kind, some portions having undergone remarkable solidification. The whole mass was the size of a melon. It was easily removed. The cavity of the abscess was lined by false membrane, similar to that found in ordinary abscess.

Abrasion of the cuticle covering a tumour, in which œdema has been established, gives rise to some curious alternations of increase and diminution of its volume. The whole tumour becomes anasarcous in many cases; and, when abrasion takes place, it is succeeded by an oozing of serum, resembling that which occurs from the legs of dropsical patients. The bulk of the tumour is rapidly diminished by the escape of this watery fluid. If the patient remains in bed, the part heals again, and the former size of the tumour is again reproduced. This alternation of increase and diminution has been described to me by several persons labouring under the disease.

Ulceration of the skin covering those tumours is deserving of especial notice, on account of the resemblance which the granulations occasionally bear to the fungus of malignant disease. The fundus of the tumour may exhibit in succession all the changes already described,—congestion, œdema, abrasion; and at length the entire thickness of the skin gives way. The granulations which are produced from this surface, irritated by the patient's dress, and congested from their position, present an aspect very different from that of granulations from any original portion of the organism. They are large, dusky red, easily made to bleed, and exhaling a very fœtid odour. Their exuberance sometimes exceeds their vital power, and they slough and throw off a portion of their surface.

There is another morbid alteration to be remarked, and which should, when it exists, modify the mode of proceeding in the treatment, namely, hypertrophy of the pedicle.

Hypertrophy of the cervix of the tumour is sometimes observed to follow the general inflammatory state of the bulbous portion, produced by friction or irritation. I have observed this change most frequently in those which spring from the nucha, just below the occiput. The neck of the tumour becomes indurated and enlarged; its colour becomes vascular and dusky; and it is painful when pressed. This induration may take place without much discoloration, but it generally extends itself a little way into the surrounding skin. The tumour now seems to droop less, and the cervix appears to be more erect, and gives the idea of being shorter than before.

If the section of the neck of a tumour in this state be made in the manner suited to those with narrow pedicles, there is a probability of its being reproduced. The cicatrix left after the operation is more prominent and harder than the surrounding skin, and gradually becomes elevated into a new tumour. The management of this condition will be alluded to hereafter.

Independent of the more chronic alterations, this class of tumours may become the seat of acute inflammation. In a case of erysipelas, which spread over the chest of a lady, a pendulous tumour, the size of a filbert, growing from the areola, suffered in common with the neighbouring parts, and, possessing less vitality than them, sloughed in the progress of the case. In another case the tumour inflamed; bullæ containing a dark fluid formed on its surface; and a superficial ulcer remained on the subsidence of the attack.

The preceding remarks, given with as much brevity as possible, will now be illustrated by cases, arranged, for practical purposes, according to the region in which the tumour is found.

Case I.—*Pendulous Tumours on the Face ; Operation.*

John Kearney, two years old, was brought to St. Vincent's Hospital 8th June, 1839, on account of vomiting and diarrhœa. It was observed that two small pendulous tumours existed on the left side of his face. One was about the middle of the cheek, the other just in front of the ear. In colour they resembled the surrounding skin. The bulbous portions were soft and fleshy to the touch. The pedicles seemed to consist of a mere prolongation of the skin in a state of great tenuity, and, although the tumours were not larger than small peas, appeared to have been subjected to some degree of traction, the length of the neck being a little shortened by raising up the tumour itself.

The mother stated that she had seen those tumours immediately after the birth of the child. They were then very small, and had since grown considerably. The only inconvenience produced by them was the consequence of accident. On one occasion the tumour near the ear was torn by a pin, and bled for some time afterwards.

The diarrhœa being cured, the pedicles were divided with a pair of small scissors; a smart oozing of blood followed, and resisted pressure made by the point of the finger ; a slight touch of the solid nitrate of silver at once arrested it: a morsel of the wool of lint was laid on it and allowed to adhere.

In six days the lint had fallen off, and the surface was found to be cicatrized, leaving a scarcely perceptible mark.

When cut into, those little tumours exhibited a surface moist with serous exudation. When dried, this surface presented a pearly colour, and the substance of the little tumour appeared to consist of cellular tissue, without any appearance of fat. An additional escape of serosity took place when the

tumour was pressed between the fingers, and the cellular tissue appeared then to have a firmer consistence.

This case is an example of the simplest and most common form of pendulous tumour. In the present instance, the tumour, though still very small, had grown with the growth of the child. This is not always the case, for the tumour sometimes appears to enlarge very little as the patient advances in life. It is an example of the cellular tumour, in which the fibro-cellular change was very faintly marked.

The simple section of the pedicle, in this case, was followed by a trickling of blood, which suggested the expediency, in subsequent cases, of including the pedicle in a ligature before its division.

Case II.—*Pendulous Tumour, with narrow Pedicle, from the Back of the Neck; Ulceration; Fungoid Excrescence; Operation.*

Margaret Cullen, twenty-two years of age, was admitted into St. Vincent's Hospital, in March, 1845, with a pendulous tumour from the back of the neck. She stated that, about four months ago, she discovered a small tumour, which she called a soft wart, growing from the back of the neck, where it joins the hairy scalp. It was the size of a large garden pea when she first noticed it. It had, on several occasions since that time, suffered from injuries and abrasions, from being caught by different articles of her dress, and then always swelled and inflamed. Latterly it became much larger, and began to discharge a liquid, which made it adhere to her shawl. These

additional inconveniences induced her at length to seek advice.

The appearance of the tumour, which was about the size of a walnut, was that of a fungoid excrescence, with apparently a broad attachment to the skin. The prominent portion of the tumour presented a thin slough, and the whole mass was bedewed with a remarkably fœtid discharge, which excoriated the surrounding integuments. A vertical fissure, which passed to the depth of half an inch, separated the mass into two lobes. On drawing forward the tumour between the fingers, it was found that the attachment to the skin, and which gave it on first view the appearance of having a very broad base, consisted, in reality, of a very narrow pedicle. The integument covering this pedicle could be traced from the surrounding integument, down upon the tumour, for about a quarter of an inch, where it was gradually thinned and lost. At this part it was that the bulb of the tumour appeared to have ulcerated, and given rise to the granulations, which, as already described, had assumed the bilobate form.

The tumour was drawn forward gently by an assistant. A silk thread, waxed, was tied round the pedicle, and below this point the part was divided with a knife-edged scissors. The ligature was removed on the following morning. The little wound was lightly touched with nitrate of silver. The part healed readily.

A portion of the granulations of this tumour was placed under the microscope by my friend, Dr. Aldridge, whose experience in microscopical inquiries justify my confidence in his report. He says: "None of the characters of malignant structure were present in this tumour." The recent parts were exhibited at the Pathological Society.

The patient recovered perfectly, and had not, when seen twelve months after the operation, the slightest appearance of a relapse.

This remarkable tumour was evidently not congenital. The

patient was very clear on this point. The bilobate appearance is a curious feature in the case. The situation of the tumour made it impossible for the patient to be certain, whether the "soft wart" had originally a bilobate form, or whether this conformation was acquired after the skin had given way. The exuberance of the granulations, their disposition to slough, and the very offensive discharge which bedewed them, gave the tumour very much the character of a malignant growth. The appearance of the tumour on section, as well as its microscopic anatomy, removed this apprehension. The healthy aspect of the young woman was an additional source of confidence on this point, which the history of the case, since the period of operation, appears to set at rest.

The provisional ligature of the pedicle was found a convenient mode of preventing annoyance from hæmorrhage, and as the ligature was removed as soon as the vessels were supposed to be sealed up by lymph, its employment was productive of no inconvenience.

Case III.—*Pendulous Tumour, with broad Pedicle from Back of Neck; Ulceration, with Granulations of a fungoid aspect; Operation by elliptic Incision.*

Jane Kelly, aged 30, was admitted into St. Vincent's Hospital July 8, 1838. She was unmarried, menstruated regularly, and had enjoyed tolerable health until March last, when she caught cold, and since that time suffered occasionally from diarrhœa and bronchitic attacks alternately.

The object of her present application was the removal of a tumour on the back of the neck, of which the following were the appearances:

The bulb of the tumour was about the size of a small plum: it consisted of a mass of granulations sprouting from a pedicle, which grew from the back of the neck, about an inch below the hairy scalp, and three quarters of an inch to the right of the mesial line. The surface of the bulbous portion was ren-

dered rather smooth by the pressure of the dressings and bandage constantly applied by the patient. Its colour was a bright red, and from two or three fissures, which passed to the depth of a quarter of an inch into the tumour, exuded a fœtid discharge. The cervix of the tumour was much thicker than is usual in such cases; its circumference was an inch and a quarter. It was covered by integument which was lost on the bulbous portion, but its cuticle was softened, and almost excoriated, by the irritating discharge which issued from the ulcerated bulb beyond it. The consistence of the whole tumour and its neck was fleshy. It was neither gristly nor medullary to the touch; and the term *fleshy* seems to express the sensation which it gave to the fingers when handled. The thickened state of the cervix prevented the bulb of the tumour from drooping much; it gave it the appearance of standing erect from the skin around it.

The account given of this growth by the patient was, that a "small lump was there from her infancy; that it was soft, and had a small stalk at first, but that it was often inflamed by being rubbed, and became larger, and then discharged matter.—This latter condition was of two years' duration. She concealed this annoying complaint, by wearing a high dress, as long as she could, but at length determined to seek advice, although she dreaded any operation."

There was no induration or unhealthiness in the surrounding skin; no enlargement of lymphatic glands in the neck; and, with the exception of the affections of the mucous surfaces alluded to, there were no other evidences of disease.

Accurate drawings of the parts in this and the former cases were made by Mr. Neilan, and from these, wood engravings by Mr. Oldham.

Guided by the result of a former operation on a tumour of this kind, with thickened cervix, and in which reproduction of the growth followed simple amputation of the pedicle, I determined to remove an elliptical portion of the healthy integument with the tumour.

The bulb of the tumour being drawn forward by the left hand, I included its point of attachment in an elliptic incision, and with two strokes of a pointed bistoury removed the whole. The edges of the wound were easily brought together with adhesive plaster, and healed by the first intention.

A section of the tumour and its cervix shewed a smooth, uniform structure. The surface being wiped, and the tumour squeezed between the fingers, no oozing of creamy fluid, like that seen in malignant structures, took place; it appeared to be a mere fibro-cellular thickening, the result of irritation.

It is now nine years since the operation, and there has not been any reproduction of the tumour.

This case presents a remarkable contrast to the one preceding it. A pedicle of remarkable thickness is found to support a tumour which, on careful section, differs in no respect from that in the preceding case, where the pedicle was narrow and delicate. It is probable that the irritation to which this tumour had been exposed occasioned a chronic inflammation, which extended to the cervix, and gave rise to its enlargement. The germ of this tumour existed from infancy, and probably from birth; but the characters it presented on her admission into hospital were clearly the result of the friction which it suffered at a later date. The ap-

pearance of the tumour on section, as well as the length of time that has elapsed since the operation, are satisfactory as to the question of malignancy. The only case I have met with resembling that now related, is one published by M. Velpeau, in the *Archives Medicales* for 1826, as a "*tumeur speciale de la peau.*" In his case the tumour was not, as in this instance, solitary.

The operation in this case, it will be observed, was more extensive than that of the preceding; but experience had made me aware of its necessity. Independent of any apprehension with respect to its malignancy, the wound from simple amputation of the neck could not have been expected to heal readily; and its hypertrophied and vascular state would most probably have laid the foundation for an unsightly protuberance. I have no longer any doubt of the propriety of removing the entire cervix in such cases.

Case IV.—*Pendulous erectile Tumour over the deltoid Muscle; Operation; keloid Tumour of the Cicatrix.*

Mary Byrne, aged 26, was admitted into St Vincent's Hospital on the 11th of April, 1842, on account of a tumour, about the size of a large grape, situated over the deltoid muscle, about an inch below the acromion process. The colour was irregularly distributed, some portions being of a deep purple hue, others more faintly tinged. A few slight elevations marked its deviation from the spherical form; those prominences were of the deepest purple colour. The circumference of this little tumour, at its bulbous part, was two inches and a quarter; where it joined the skin of the arm it became narrower, and here its circumference was only one inch. The colour of this cervix was less purple than that of the tumour, but strongly contrasted with the surrounding parts. When taken between the fingers the tumour could be rendered flaccid by pressure, and it lost the purple colour. Both colour and

volume returned in a few seconds after the pressure was removed. No pulsatory or other movement could be detected by the most careful manipulation.

She stated that a small purplish elevation existed for many years in this situation. She considered it to be what is termed a mole, and gave it no consideration, until it began to enlarge, and catch in her dress. Its increase has been steady for the last twelve months, and it bled a short time ago on being accidentally pricked with a pin. She was, therefore, anxious to have it removed.

On the 14th of April the operation was performed in the following manner:

The tumour being held by the fingers of my left hand, I made a semilunar incision through the integuments on the outside of the tumour, about half an inch beyond its point of attachment. This portion was then caught by a double hook, and drawn to the outside or dorsal aspect of the shoulder. Another semilunar incision on the inside now completed the ellipsis, and the tumour was at once detached. It was remarked at the time, that, although no vessel required a ligature, the oozing from innumerable pores on the surface of the wound was in greater quantity than is usual after the removal of tumours of less vascular structure.

The parts were brought together by adhesive straps, and healed by the first intention.

A section of the tumour exhibited the appearances tolerably well represented in the annexed wood engraving.

The surface of the section presented several cavities lined by a smooth, shining membrane. On tracing those cavities with a fine probe, it was obvious that they were sections, in different directions, of tubes, which, however, owing to their tortuous shape, could not be followed far. The surrounding cellular tissue was spongy, and yielded on pressure a slight sanguineous oozing. When examined with a lens of some power, a number of small canals could be discovered. There remained no doubt that the tumour was one of vascular hypertrophy, in which the veins were principally engaged.

The subsequent history of this case is interesting, and, although belonging to another branch of inquiry, may be briefly noticed here. Four months after the operation described, this young woman returned, complaining of some pain in the cicatrix. This part was found, on examination, to have enlarged considerably, and occupied a space of three-quarters of an inch broad, by which the original lines of incision in the integument were now separated. The cicatrix, besides being broad, was also elevated at its middle, and was covered by a smooth, shining cuticle, through which a number of minute arborescent vessels were to be seen. It was, in fact, an example of the degenerescence termed *keloides*, by Alebert, Rayer, and Warren.

The whole of this cicatrix was removed by a free, large, elliptic incision, and the parts healed very well.

From the appearances already described, the structure of this tumour was sufficiently manifest before operation. A nævus assuming the pendulous form is an exception to the rule usually observed by those productions. It will be seen hereafter that a much more formidable character may be imparted to a tumour of this kind by the deposit of malignant structure. It is a form of tumour which requires to be freely removed, and the disposition to hypertrophy of the vascular apparatus was in this instance evidenced by what took place in the cicatrix.

Case V.—*Small pendulous Tumours on the scapular Region; Operation.*

Anne Farley, aged 43, applied at St. Vincent's Hospital on account of bronchitis. In the course of examination of her chest it was observed that two small pendulous tumours hung from the integument of the left scapular region, and another from the back of the arm, near the shoulder-joint. They were all about the same size, that of a large pea; but their shape was pyriform. The colour was that of the surrounding skin, with a slight blush of red about the fundus or most depending part; the pedicle was very small and delicate. The consistence of the tumours was fleshy, and their bulk admitted very little diminution on pressure between the fingers.

These tumours had scarcely undergone any increase of size for many years. She could not remember a period when they were not to be felt as at present. They produced no other inconvenience than that of being now and then caught and bruised by her dress. She was anxious, however, to get rid of them, when informed that it could be done with safety.

The little growth on the back of the shoulder was removed with a pair of scissors. The oozing of blood was so free, that, previous to removing the two others, I included the pedicles

in fine silk threads, tied just so tight as to prevent bleeding, when the tumour was cut off below the knot. The ligature was removed in three hours afterwards. A morsel of lint was placed on the spot, and retained by adhesive plaster.

The tumours, which became blanched immediately after being removed, exhibited on section a smooth surface, consisting of a little cellular tissue included in the duplicature of skin.

No inconvenience followed the operation, and the part healed in a few days.

These tumours, evidently congenital, resembled in all respects those described in the first case, as occurring on the face of the child. It was remarkable that, although the patient had reached the middle period of life, the tumours were still as small as they had been in infancy; and the cellular tissue of which they were composed was scarcely more dense than that in the other case.

Case VI.—*Large pendulous Tumour, attached to the left Side of the Abdomen and Loin; Morbid Changes in the Tumour; Operation.*

Catherine Murphy, aged 32, was admitted into St. Vincent's Hospital, 13th of September, 1841, on account of a large tumour which grew from the left side. The tumour had a broad attachment beginning at the left loin, about a hand's breadth from the spine, and extending forwards on the abdomen for about five inches. The integuments were drawn down by the weight of the mass, so as to constitute a short but distinct pedicle, which became narrower as it descended, and then expanded over the fundus of the tumour, which measured at the latter part seventeen inches in circumference. The consistence of the mass was unequal. Its upper and middle portions were soft, elastic, and what is termed woolly to the touch, giving satisfactory evidence of its adipose nature. The lower portion of the tumour was unequally hard. The induration was very remarkable, when pressure was made deeply, in some

places, through a stratum of œdematous infiltration more superficially situated. The fundus of the tumour had a few dilated veins, and its surface was dusky red, contrasting with the natural colour of the skin covering the remainder.

The diagnosis of fatty tumour was at once registered, although the exceptional features of the case were clearly recognised. The obvious and familiar characters of the tumour, at its upper and middle parts, were not nullified by the peculiar condition of the fundus, since the mechanical position of the whole growth was adequate to their explanation.

The account given by the patient was, that, ten or twelve years ago, she remarked a fulness in the part. She was then becoming fat, and only thought that one side was a little more fleshy than the other. About four years ago the part began to hang down, and since that time enlarged rapidly, and acquired its present size. On several occasions the tumour became sore and inflamed, from injury, and a certain degree of feverishness accompanied those attacks.

The removal of the tumour was determined on in consultation. There was not sufficient reason for presuming the existence of any malignant deposit, but the morbid changes already effected by time forbade any further delay in operation.

On the 18th of September, the patient was brought to the theatre, and placed recumbent on the operation table. The tumour was held up by an assistant, while I included its neck in an elliptic incision, exposing the delicate capsule which invested the adipose substance at its root. The whole of the morbid growth was thus easily and rapidly turned out.

Several vessels sprang, and required ligatures. The wound appeared very large when the skin had retracted, but a slightly inclined position of the trunk permitted the parts to be drawn together. The healing process took place by granulation, without any untoward occurrence.

A section of the tumour displayed a well-marked instance of fatty tumour. The adipose substance was continued through the cervix a short way into the cellular tissue of the loins. In this portion, as well as in the superior and middle portions, the fat was of the soft structure usually met with, and the containing cells were large and composed of very fine cellular tissue. At the fundus, and corresponding to the indurations before alluded to, the fat was firmer, and the cellular tissue more condensed, approaching the character of fibrous membrane: the properties and appearance of adipose matter were, however, unequivocal throughout. The whole mass was enclosed in a capsule of fine cellular membrane, which sent processes, conducting the vessels into its interior.

As a case of adipose sarcoma, this tumour presented some phenomena worthy of remark. In the first place, there were a number of irregular indurations, of scirrhoid density, which were calculated to suggest the idea of malignancy. Secondly, there were a number of large veins ramifying over the surface, in the manner usually seen in fungoid tumours. Thirdly, there was an anasarcous condition of the subcutaneous cellular tissue, which caused more than one person who examined it to suspect the existence of matter.

The first of these phenomena, however, could be accounted for by the probable hypertrophy and induration of the cellular membrane, occasioned by repeated contusions, together with the congestion of the capillary system from gravitation; the second, or superficial varicose condition, was, perhaps, a corollary of the former, and arising from stasis of the venous blood in a large and depending tumour; and the third seemed analogous to the œdema of varicose limbs, or that observed in the extremities in

certain cases of cardiac obstruction. From these considerations, the adipose character of the tumour was recognised through the obscurity occasioned by morbid changes, to which time and repeated injury had given rise.

The mode of operation in this case was that adapted to the removal of fatty growths, wherever situated. It is obvious, from all the circumstances of this case, that the operation could not be with propriety any longer postponed.

Case VII.—*Small pendulous Tumour beyond the Areola of the Female Breast; Operation.*

Margaret Rich, aged 50, applied at St. Vincent's Hospital on the 19th May, 1847, on account of a tumour in the axilla, and at the same time shewed a small pendulous tumour growing from the integuments of the right mamma, about half an inch on the distal side of the areola. The tumour was about the size of a pea, soft and fleshy, and supported by a delicate pedicle about an eighth of an inch in length. The skin of both bulb and pedicle was pale, like the surrounding parts. She could give no account of the date of this little production, and believed that it occupied its present situation as long as she could remember. No inconvenience was experienced in the part, and it had escaped hurt or injury. She expressed a wish to have it removed.

On the 21st of May a fine silk thread was tied (but not tightly) with a slip-knot round the pedicle, close to its attachment to the breast. The tumour was removed near to the ligature. No oozing of any kind took place. The tumour exhibited, on section, a margin of common integument; next to this a slight blush of vascularity; and, in the centre, a white disk composed of cellular tissue, very slightly condensed.

The slip-knot was untied the next morning; the cut surface appeared dry and shrunken. The spot was cicatrized, so as to be nearly invisible in a few days.

This is the simplest form of pendulous tumour, and was, most probably, congenital. The size, if it had ever undergone change, was not perceptibly altered from the time the patient was capable of observing it. It had never encountered injury or irritation, and, consequently, had no stimulus for increased nutrition or hypertrophy.

The next case is different from the preceding, in its site, size, and its having suffered certain morbid changes.

Case VIII.—*Pendulous Tumour from the Areola of the Female Breast; Operation; Fibro-cellular Structure.*

Ellen Jones, aged 28, admitted into St. Vincent's Hospital on the 11th of February, 1838. She was married, had two children, and was now three months pregnant. She sought advice on account of a tumour the size of a large grape, which grew from the areola, about half an inch from the base of the nipple.

The tumour was tolerably smooth on the surface, and was without cuticle at its fundus, which was constantly bedewed with a serous secretion. Its colour was a dusky red, inclining to purple. It was suspended by a pedicle of a reddish hue, extremely delicate in consistence, and about half an inch in

length. The consistence of the tumour, though not hard, had the firmness of a fibro-cellular structure.

She stated that this tumour began to grow shortly after the birth of her first child. It very gradually increased, and had attained about half its present bulk at the period of her second confinement. During the nursing of this second child, the tumour was subjected to repeated injury, by the infant grasping it for an instant between its lips, and thus causing it to bleed.

Its growth then increased remarkably, although she took great care to protect it from the child, by drawing it on one side when he was about to suck. She dreaded so much a repetition of this inconvenience after her next confinement, that she determined to have it removed. Her health was good in other respects, and there was no enlarged lymphatic in the axilla, or elsewhere.

During the few days she was in the hospital, before operation, the tumour suffered a contusion, for which she could not account, except by supposing that she bruised it by turning in the bed. The bulb of the tumour was ecchymosed, and at one point the cuticle was elevated into a bulla containing a very dark-coloured serum. A cold bread and water poultice removed this condition, and reduced the tumour to nearly its former state.

The tumour was removed in the following manner: the pedicle was included in a fine silk ligature, and divided below that point; the cut surface was touched with nitric acid; the ligature was removed in a few hours, and the part covered with wetted lint. In a few days the spot was perfectly healed, leaving no mark whatever.

A section of this tumour had a glazed and watery surface, somewhat resembling the section of a peach. The colour was a greyish white, except towards its periphery, which was still ecchymosed for the space of two or three lines, exhibiting

the consequences of previous contusion. A single artery supplied the tumour with blood.

This production of the skin of the areola probably included some portion of the structure peculiar to that part. Its enlargement was evidently accelerated by mechanical injury during lactation, a period when the organization and vascularity of this part was in a state of excitement. Its pedicle was, notwithstanding, as delicate as that of a congenital pendulous tumour. Its structure was fibro-cellular, the cells containing a large proportion of serous fluid, but manifesting no trace whatever of malignant deposit.

Case IX.—*Remarkable pendulous Tumour, growing from the Side of the Nipple of the Female Breast; Operation; peculiar Structure.*

Ellen Hardy, aged 27, unmarried, requested my advice on account of a tumour growing from the right breast. Its point of attachment was close to the nipple, on its outer side, and it carried along with it the peculiar integument of that part. The pedicle was about two inches in length, and of a dusky red colour. It was funnel-shaped. It was half an inch in circumference at its upper part, and very near an inch below. From this part it suddenly expanded into a tumour five inches in circumference, of extremely irregular figure, presenting clefts and elevations, and having very much the appearance of a walnut-shell, but fully double its volume. The colour of the tumour was a pale grey on the prominences; in the clefts it was a dark grey, and here a sebaceous secretion of remarkably fœtid odour was accumulated. This fœtor was, to the patient, a greater annoyance than the bulk of the tumour itself. The consistence of the tumour was fleshy and equal; that of the pedicle was

softer, and in it the pulsation of a very small vessel could be distinguished.

She stated that this tumour had been observed before the period of menstruation, and that its increase in size since that time had been progressive. She had some trouble to prevent its being injured by her dress, and was hitherto most anxious to conceal it. The principal uneasiness it occasioned, however, was that arising from the offensive odour of the secretion which constantly bedewed the fissures of the tumour.

A drawing of the parts, before operation, was made by Mr. Neilan, and an engraving, an impression of which is annexed, was subsequently executed by Mr. Oldham.

A silk thread was applied round the pedicle, a short distance from its attachment. The thread was tied with a degree of tightness barely sufficient to prevent the escape of blood from the vessel. The pedicle was then divided, and the cut surface touched with nitric acid, which caused very little, and only momentary pain. The ligature was removed at the end of six hours. No oozing whatever of blood took place. The part was covered with lint, moistened with cold water. It was completely cicatrized in a few days, and left no trace of its existence in the breast.

The tumour was exhibited at the meeting of the Pathological Society held the same day. Its section displayed a remarkably smooth and uniform structure, of a milk white colour. Towards the margin of the section, and in the situation of the prominences, the colour deepened into a brownish grey tint. Pressure on the tumour caused the escape, in extremely small quantity, of a liquid having a serous appearance, and bearing no resemblance to the creamy fluid of a malignant tumour. The microscopic appearance of the structure was also considered satisfactory on this point.

The origin of this tumour appeared to be owing to hypertrophy of some of the follicles in the neighbourhood of the nipple. Having once become pendant, the cellular tissue became the seat of a similar hypertrophy, necessary, perhaps, for the support of the increasing weight. The peculiar secretion, which was the source of such annoyance to the patient, issued, most probably, from the follicles alluded to, as well as from the sebaceous follicles common to it with other parts of the skin.

The temporary ligature of the cervix was useful in preventing the troublesome escape of blood, and, being removed at the period when contraction of the vessels might be supposed to secure the patient from hæmorrhage, did not give rise to any of the inconveniences belonging to the sloughing process. The touching of the cut surface with nitric acid contributed also to the same result. The practice appears, according to my experience, to lessen the liability to inflammatory reaction in the divided tissues.

Case X.—*Large pendulous Nævus, growing from the left Lumbar Region and Side of the Abdomen.*

James Canton, aged 16, was admitted into St. Vincent's Hospital, August, 1847. His complexion was pale, but not sallow or unhealthy, and his muscular system was well developed. He was brought to the hospital on account of a large pendulous tumour occupying the left side of the abdomen and loins, and hanging downwards for eight inches from its line of attachment towards the crest of the ilium, which it reached. The thickness of this growth at its fundus or lower part, when held between the finger and thumb, was about an inch and a half. Higher up its thickness was not so great. The colour of this tumour, in the posterior four-fifths of its extent, was a bright and not very deep purple colour. The anterior fifth of the flap had the natural colour of the skin. The line of demarcation between those two portions was irregular, but very well defined. The integuments of the loins higher up, and of the chest and abdomen in front of the tumour, presented irregular elevations of a purplish colour, the tint in some spots being very deep. The consistence of the tumour was rather soft, admitting of its being bent or folded in any direction; but this consistence was mingled with innumerable nodules, of almost cartilaginous hardness, dispersed through its interior. Many of those nodules appeared to be connected by short cylinders nearly as hard as themselves, and some of the elevations were perceptible to the eye, giving the integument a coarse and irregular surface.

His father stated that, when the child was two years old, a small mole, about the size of a pea, and of a reddish purple colour, was first observed about an inch to the left side of the lumbar spine. In the succeeding ten years its increase was very slow. At the end of that time it had attained the size of a shilling. Subsequently other small swellings appeared, extending in the direction of the abdomen, and, coalescing by degrees,

formed a large discoloured prominence, which began to descend by its own weight. The bulk of this pendent portion now augmented very quickly; the skin became rough, thickened, and discoloured, like the other tumours, and by degrees assumed its present shape.

A careful examination of this tumour was sufficient to establish its nature, although it had undergone, in some places, a material change. If any doubt could be entertained it was easily removed by reference to the obvious characters of nævus presented by those portions of the disease which extended towards the anterior portion of the abdomen. It was clear that the pendulous growth had undergone solidification in parts, and that the calibre of the vessels had been, in a great degree, obliterated.

Although this large flap is a source of great inconvenience to the patient, it has not been deemed prudent to amputate it without insuring the complete obliteration of its vascular structure where it joins the trunk. This object, it is hoped, will be effected, in the present case as in others where I have tried

it, by the puncture cautery, and the result will, probably, be given in this Journal at another time.

Case XI.—*Pendulous encephaloid Tumour on the Abdomen, near the Groin; Operation.*

Anne Nolan, aged 40, admitted into St. Vincent's Hospital on the 4th of August, 1847, on account of a tumour pendulous from the lower part of the right side of the abdomen, just above the groin. The tumour was oblong transversely; its circumference in the long diameter five inches, and in the short or vertical diameter three inches. The surface was irregular and bulbous, without cuticle, and bedewed with a viscid and rather fœtid secretion. In colour it was that of ordinary granulations when in a depending position, a dusky red. One of the mammillary projections on its anterior surface had a deep purple hue. The tumour was suspended by a pedicle composed of integument of the natural colour and the consistence of the abdominal skin. It was thin and flattened, measuring about three-quarters of an inch where it sprang from the abdomen, and becoming much smaller as it descended to enter the tumour,

which, growing up on all sides of it, concealed it altogether. Slight traction gave a clearer view of this flattened pedicle of healthy skin, which then appeared to enter and be buried in the tumour, resembling the manner in which the vascular apparatus of the kidney enters that organ. The consistence of the tumour was remarkably equal, no one portion appearing to possess more elasticity and softness than the remainder. The whole had a fleshy or springy feel, not easily described, but conveying to the finger a sensation different from that of ordinary granulations, or of fibro-cellular productions. There was no evidence of lymphatic disease in the neighbourhood.

The woman was pale, but she describes her general health as being good, with the exception of the menstruation, which for the last four months has been irregular and scanty.

She states, that from infancy there existed a small brown stain or mole, about the size of an almond, which, for thirty-nine years, was productive of no inconvenience. About twelve months ago she began to experience an intolerable itching in the part, which induced her to rub it very frequently, and which was soon followed by perceptible enlargement. About ten months ago, and when the tumour had acquired the size of a hazel-nut, the dark-brown skin which originally covered it began to give way under the friction, and was soon lost altogether. The itching sensation now gave place to soreness, and the surface of the tumour presented a flesh colour. The volume of the growth now progressively increased, and within the last two months has appeared to grow more rapidly, until it acquired its present size.

On the 6th of August the tumour was removed. When the divided pedicle retracted in the abdomen, it left a space about an inch broad, from two points of which a smart flow of arterial blood took place, requiring the application of ligatures. The whole surface was then freely touched with nitric acid, and a poultice was applied.

The wound healed by granulations, and looked healthy in its progress. A section of the tumour was made, and the part suspended, while an accurate drawing was made, as seen in the accompanying engraving. Several globular tubera were thus divided. They occupied the central portion of the tumour principally, several of the smaller ones approaching nearer to its periphery. Their colour was white, very faintly tinged with yellow. They were of various sizes, the largest about the diameter of a split pea, the smaller ones becoming more and more minute, until they were lost in the general substance of the tumour. In consistence they were soft, but very elastic; and the latter property existed in such a remarkable degree, that, in a few minutes, the cut surface of each tuber sprang forward into an almost hemispherical shape. Pressure with the finger easily reduced the little section again to a flattened shape, but it soon afterwards resumed its mammillated form, appearing not unlike the cut surface of a testis. Lateral pressure expressed from these surfaces a fluid of creamy consistence. Anxious to submit the specimen to the test of the microscope, I requested my friend, Dr. Butcher, who has given much attention to this subject, to examine it carefully. The following is his report:

"The specimen which you gave me for examination yesterday I immediately submitted to the test of the microscope, and the result of a long and careful examination leaves no doubt in my mind as to its encephaloid character. The entire substance of it was made up of cancer cells, and their product caudate corpuscles, with contained nuclei: a more perfect specimen of this arrangement I have never witnessed. I could not, by any treatment of the tumour, produce any other than the one appearance of the structure—the irregular arrangement of the cells, and spindle-shaped corpuscles. The separation or tearing of the tumour, in any direction, would not give a fibrous arrangement, as stated to exist sometimes by Valentin."

Case XII.—*Large pendulous Tumour from the Labium Pudendi; Anasarca and Ulceration of the Fundus; Operation.*

A woman aged 30 was admitted into St. Vincent's Hospital 23rd January, 1844. She was married, and had three children. Her appearance was that of delicate health, but she had not lost flesh.

A large pyriform tumour hung from the left labium pudendi. The pedicle was five inches in length, and allowed the tumour to reach to the lower third of the thigh, when the patient stood erect. The point of attachment above was at the inner surface of the labium, which, as well as the inside of both thighs, was marked by large, tortuous, and prominent veins. The thickness of the pedicle was about that of the middle finger. Its integument was thickened, and of a dusky red colour, and, when pressed between the fingers, it was found to enclose a single artery, about the size of the ulnar, which pulsated strongly. The bulb of the tumour was pyriform, and measured seven inches in circumference. The skin was a dusky red colour, and at its most depending part had evidently given way, leaving an irregular ulcer about an inch long, and half an inch broad, which resembled very much the ulcers seen on a prolapsed vagina. From the surface of this ulcer there was an oozing of serous fluid, which trickled down the neighbouring parts. The tumour was soft, and yielding to the touch, and retained the impression of the fingers.

The account given by this patient was, that seven months before admission she perceived a small lump growing from the part, and that the stalk became longer every week since, as the tumour increased in size. From its inconvenient situation it interfered greatly with her movements, and was frequently subjected to injury and consequent inflammation, which latter occurrence was always followed by a remarkable increase

in its size. About two months ago, the skin at the bottom of the swelling gave way, and a copious discharge of watery fluid took place. This was immediately followed by a sensible diminution in its bulk, and she hoped it was about to disappear. The discharge ceased after a few days, and then the volume of the tumour increased again. This alternation of diminution and increase of the swelling took place several times since that period. She at length resolved to seek advice for an inconvenience which, for many reasons, was becoming intolerable; and the removal of the mass was advised.

On the 26th January the tumour was removed. In order to avoid any unnecessary loss of skin at the labium, the tumour was poised on the hand of an assistant, so as to take off the tension of its pedicle. The latter was then seized between the fingers, near its origin, and held firmly, to prevent the artery retracting too suddenly into the loose cellular tissue. The cervix was then divided by a single stroke of a strong scalpel.

The artery was next included in a ligature, and the surface of the wound touched with solid nitrate of silver. All smarting of the incision soon ceased, and the patient was left to rest, the bed-clothes being prevented by a hoop from touching the parts. The healing took place favourably, and no trace of the tumour remained.

On examining the tumour, which was exhibited to the Pathological Society, the pedicle was found to consist of thickened cellular tissue and skin, enclosing an artery and vein, the branches of which became invisible immediately on entering the bulbous portion. The section of the bulb was very moist, and exuded a serous fluid copiously. When pressure was made this oozing was increased greatly, and the bulk of the tumour considerably diminished. It was evident that the principal volume of the tumour was owing to anasarcous infiltration into cellular tissue a little condensed. The section resembled very much the appearance of an anasarcous scrotum or lower extremity, when examined in the same way. It had, perhaps, a still

closer analogy with the simple polypus of the neck of the uterus, diminishing in volume when the serous fluid is expressed.

The rapid development of this tumour is remarkable, since the fact of a speedy development is generally supposed to be, and really is occasionally, a ground for suspecting the existence of malignant disease. The peculiar sensation conveyed to the touch on examination, the smooth and uniform surface, the pyriform shape, and the evidences afforded by the periodical exudations of serosity, all led to the opinion that it was what is called *analogous*, or non-malignant, in its nature. In this, as in some former instances, a part remarkable for its glandular structure gave rise to a tumour of larger dimensions than those produced by integument in other situations.

In the present case a temporary ligature would have been insufficient, and a permanent ligature, including the integument and contents of the pedicle, might have been followed by erysipelas, or some other irritative reaction. The plan I adopted, then, was that employed in the management of the cord while removing the testis. The pedicle was held by an assistant, and the section being accomplished, the artery was tied in the usual manner.

HISTORY.

Pendulous tumours are apparently more frequent in female patients than in males. They may be congenital, or they may be formed at any subsequent period of life. Of the former class, some remain stationary, or grow so little after birth, that their growth can scarcely be said to keep pace with the development of normal parts. They are found, at a mature or advanced period of life, to be in size nearly as they were observed at the time of birth. They have lost, perhaps, the plumpness belonging to the skin of infancy, and their colour, changed by age with that of the surrounding skin, is a little deepened or dusky at the bulb from venous congestion. I was consulted in May last by a lady seventy-nine years old,

who shewed me a small pendulous tumour on the side of the chest, just below the breast. It was about the bulk of a very small pea; it was suspended by a delicate pedicle, which consisted merely of a duplicature of skin. The bulb of the tumour presented a slight purplish blush. This tumour, she was always told, was observed at birth, and had not altered in size from that time.

Others, after remaining stationary for an indefinite period, enlarge, inflame, and become the seat of morbid action, or the nidus of morbid deposit. The earliest change of this nature is often traced to some accidental friction or laceration, to which, from their pendulous form, they are so much exposed.

When a pendulous tumour begins to enlarge, its hypertrophy is attended by some or all of the other phenomena described in the beginning of this memoir under the head of *morbid alterations*. Increased nutrition implies an increased supply of blood; and this, combined with the retarded venous current arising from the absence of the support which it receives in other situations, induces congestion and its consequences. The fundus of the tumour becomes dusky and discoloured; serous infiltration follows; the cellular tissue becomes unequally hypertrophied; and indurations there and in the skin are to be distinguished. Abrasion next takes place, and, as in a dropsical limb, gives exit to a watery discharge, which softens and excoriates the neighbouring skin. The whole thickness of the cutis occasionally gives way, and granulations, —flabby on account of their unsupported position,—spring from the ulcerated surface, and give the whole a fungoid appearance. While these several changes are taking place in the bulb of the tumour, the pedicle may remain of its natural colour, and only change in volume in consequence of the hypertrophy of the nourishing vessels it includes; occasionally, however, the irritation and hypertrophy may extend to the pedicle, and then its colour becomes red, and its thickness increased. This thickening and congestion may even spread for

a short distance into the surrounding integument, and give it an unhealthy aspect.

Such is the usual history of congenital pendulous tumours, which, from irritation, generally mechanical, once begin to enlarge.

In this category may be included those which, existing in a different form at birth, acquire their pendulous shape at a later period, and apparently in consequence of an increased volume, the weight of which occasions, by traction, an elongation of the skin. The pendulous nævi are generally so formed. At birth there may be a simple elevation of the skin, stained, as usual, by the colour of the blood contained in the erectile tissue. The colour varies from one shade to another of the tints observed in practice. This elevation of the skin may remain unchanged for years, and at length begin to expand; but once the impetus is given, the bulk of the swelling generally increases; and if the growth is so situated that gravitation is almost constantly operative, the pendulous form is eventually acquired. The characters of such a tumour will be found to vary according as the circulation through its vessels is free; or as consolidation of these channels and the surrounding cellular web has taken place. In the former case, the tumour, when pressed between the fingers, becomes flaccid and pale; and when the pressure is removed, the fulness and colour of the part gradually return. When a tumour of this kind is accidentally pricked, it bleeds freely, and indicates the nature of its contents.

If, on the other hand, the tumour be of long standing and considerable size, and its vessels have, in fact, become solidified, the part gives to the finger the sensation of a number of solid cords running in different directions through the mass. Neither the colour nor the volume of the growth can be materially diminished by pressure. The diagnosis of this peculiar modification of nævus will generally be assisted by the presence, in the neighbourhood, of erectile tissue in a less equivocal form,

and yielding to a careful examination all the evidences necessary to establish its real nature.

In the second class, or those which are formed after birth, we shall find the simple cellular and the adipose tumours, in either of which the malignant degenerescence may eventually take place. The early history of these cases is that of all similar formations. The cellular tumour is generally described as beginning like a "soft wart," and its enlargment is ascribed to injury or laceration from accident. Its anatomical characters have been already described. Its external appearance will be found to vary according to the locality in which it is placed; and even in the same locality, according to the organization and peculiar function of the spot from which it springs. This is well exemplified in the several cases of *pendulous tumours of the female breast* already related. There is a peculiar arrangement in some of those tumours which is deserving of notice. The surface of the growth seems to be formed by a number of vegetations growing parallel to each other, at right angles to the surface of the tumour. Each of these elevations presents, at its extremity, a cuticle thickened and hardened into a warty consistence, and with a brownish grey colour, different from that of the remainder. I do not consider this appearance to be peculiar to productions of the dermoid tissues. The mucous membrane may give origin to warty growths exactly resembling what has been now described. There is a woman at present under my care in St. Vincent's Hospital, who suffers from a polypoid growth in the left naris; the surface of the tumour is constituted by prolongations of this kind. This woman was in the hospital eight years ago, but refused to allow any interference with the tumour. It had then precisely the same surface as at present, and it did not pass beyond the opening of the naris. This remarkable limitation still obtains. It does not transgress the boundary of the anterior opening of the nose, where it has no resistance to oppose its growth; and yet it has enlarged in every other direction, overcoming every

obstacle, and expanding the ala nasi, separating the nasal bones, and even making its way into the orbit.

The adipose tumour frequently becomes pendulous when circumstanced favourably for this occurrence. When large, and of long duration, it may present any of the morbid changes already alluded to. I have seen abscesses form in a pendulous adipose tumour; and I have removed pendulous fatty tumours of long standing, in which a familiarity with morbid structures enables me to say I found distinct nodules of malignant deposit.

We have thus seen, that, whether congenital or otherwise, some pendulous tumours become malignant; while others, and I believe the majority of them, remain exempt from heterologous deposit to a late period of life.

I believe, however, that a pendulous tumour is rarely the seat of encephaloid or cancer at the period of its first formation. This is my present impression, and if future experience confirm the opinion, it will follow: first, that all pendulous tumours should be removed at the earliest period at our disposal; and, secondly, that we can then do so with the fairest prospect of a permanent cure.

The grounds for my opinion, that pendulous tumours are never malignant at the period of their origin, are, first, that I have removed tumours of this kind, containing tubera of encephaloid, and which were suspended by a pedicle of thin healthy integument; and secondly, that, when encephaloid is deposited in or under the integument, its further development or reproduction is always in a lateral direction, where it has most support, and it, therefore, does not become pendulous. If encephaloid accumulated in the forward, rather than in the lateral direction, the cuticle must soon give way and expose the fungus. The tumour would thus be prevented from remaining undetected sufficiently long for the formation of a stalk or pedicle, by the traction occasioned by its weight.

Before concluding the subject of malignancy in tumours, I

may be permitted to say a few words on the disputed question of the value of microscopic researches in pathology. Some pathologists declare that the microscope is a fallacious guide, while others place an unlimited reliance on its aid. I am sure that great experience in such researches is necessary, to render any individual a competent and credible witness in the matter. But the chief objection to microscopic anatomy has been founded on the liability to error, arising from the use of instruments of inadequate or excessive power, and to the probably unequal susceptibility of the visual organs of those engaged in such researches. I believe that, so long as those investigations are conducted by individuals, the objection will continue to be made, and, perhaps, to exist.

The practice of making chemical experiments by two professors of the art conjointly, has been found to work well, and to lead to results of the most satisfactory and conclusive nature. My impression is, that the microscopic examination of morbid parts should be conducted on the same principle. If, for instance, two inquirers, already familiar with morbid appearances, examine successively the same specimen; if the first, having attentively surveyed the appearance, makes a careful sketch of their arrangement; if the second observer then repeats this process independently, and without having seen the first sketch; if, on comparing their sketches, the forms and arrangement of the parts differ, or something appears in one which is not found in the other; then let the specimen undergo fresh examination, until both are agreed that nothing has escaped remark. When this is the case, or when, on comparing their sketches in the first instance, the appearances are found to be identical, surely they may be registered as "an observation." The next step will be, to select that form of expression which, for its clearness and simplicity, seems best fitted to convey to the minds of others the impressions already made upon their own. Observations such as these,—facts, patiently observed, and methodically recorded, by two minds directing their united

powers to the one object,—will be received with confidence by the profession, and tend to settle the claims of the microscope as an agent in pathological inquiries.

TREATMENT.

It has been shewn that some of those tumours, after remaining stationary for years, become the seat of morbid action or morbid deposit. It is obvious, from this fact, that the best rule of practice is, to remove them when first presented to our notice, unless some clear contra-indication be present at the time. The treatment, then, of pendulous tumours, resolves itself into a description of the modes of operation required in particular cases. The morbid alterations to which those tumours are liable may, it is true, require a medication calculated to remove the irritation incidental to these changes. Such proceedings, however, are not to be regarded as remedies for the disease, but as measures preparatory to its complete removal by operation.

In its simplest form, the pendulous tumour seems to require merely the division of its pedicle by a knife-edged scissors or scalpel; but the point at which this division is to be effected requires consideration. If the section be made too near the bulb, an unsightly projection will remain after the operation; if it be done too near the other extremity of the pedicle, the integument, on retracting, will leave a wound, and consequently a scar, much larger than could have been anticipated. Allowance, then, must be made for the elongation of the pedicle by the weight of the bulb, and for the contraction of the stalk, which always follows its division,—the same process which renders it unnecessary to tie the neck of an uterine polypus close to the mucous surface from which it has grown. The best mode of proceeding is, to poise the tumour on the hand, and allow the surrounding skin to retract and recover its pristine position, and then to make the section of the pedicle a little below its origin. Should the nutritious artery be large

enough to deserve attention, the jet of blood may be prevented by previously including the neck of the tumour in a provisional ligature, and, when the section is accomplished, tying the divided artery. The provisional ligature may then be removed altogether. A slight touch of the nitrate of silver, just sufficient to produce a delicate white coating, will not only shorten the duration of the subsequent smarting, but lessen the probability of any reaction, especially of an unhealthy kind. It has appeared to me, that whatever seals up the cellular tissue, or the orifices of divided vessels of every denomination, diminishes the tendency to diffuse or troublesome inflammation. Simple water dressing will then complete the local treatment.

In operating on the adipose pendulous tumour, the extent of interference with the pedicle will be regulated by the presence or absence of fatty matter in its substance. If the growth extend through the neck into the subcutaneous cellular membrane beyond it, such an incision must be made as will allow of its complete extraction. In such a case, the small cavity then left should be filled with lint dipped in olive oil, and the integument brought gently over it, to prevent an unnecessarily large cicatrix. The lint is withdrawn when suppuration is established, and the integuments brought together by adhesive plaster.

The proceeding in the case of pendulous nævus is somewhat different, and must be adapted to the peculiar circumstances of the case. It is not usual for the pedicle, in such instances, to be entirely free from all traces of erectile tissue. Should the pedicle be implicated, or should the vessels of the cellular or dermoid tissues beyond it be hypertrophied, a simple section would be inadequate to the cure; hæmorrhage of a troublesome nature would be the immediate result, and reproduction of the disease the more remote consequence of such an imperfect procedure. The diseased part must be included in an elliptical incision, and thus freely and completely removed. In the case of pendulous nævus of the shoulder, already related,

the disposition to vascular hypertrophy was so strong, that, although the tumour was removed with an ellipsis of the surrounding skin, the cicatrix became afterwards enlarged and vascular, assuming the form of keloid tumour. It may happen that the erectile formation may extend irregularly, for a considerable distance, beyond the origin of the pedicle. In such cases, the amputation of the pedicle alone would entail the consequences already alluded to, while the excision of the whole of the morbid structure might be forbidden by its extent, or by the importance of the parts in which it is found. The following is the mode I would recommend under such circumstances, and when the removal of the pendulous tumour is desired on account of the inconvenience it occasions. The tumour being held horizontally and on the stretch, the point of the style or nail cautery, described by Dr. Wilmot, should be passed through the cervix in several places, so as to ensure the obliteration of the vessels contained in that place. The whole cervix may be traversed by these punctures at one or several successive operations, according to its breadth. When the vascular character of the cervix is thus changed, its section may be performed, without risk of hæmorrhage. A series of seton threads would accomplish this object, but in a manner much more tedious and painful to the patient. The mode of obliteration of erectile tissue employed by Dr. Wilmot is, I know, a great improvement on the previous practice in such cases. Its adaptation to pendulous tumours previous to their section, will, I trust, be found available, and I would venture to recommend it.

When a pendulous tumour is known, or suspected to be malignant, great care must be taken to remove the entire of the morbid parts. If, as in the case described, the heterologous structure be confined to the bulb of the tumour, and the pedicle or surrounding skin be healthy, there can be no reason for doing more than simple section of the former; but the section should not, for obvious reasons, be made too near

the bulb. But should the neck of the tumour be thickened, hardened, or irregular, a free elliptical incision should be made in the integument beyond it, and all suspicious parts satisfactorily removed.

It would have been easy to add to the number of cases, by relating those furnished by my notes of private practice. I preferred, however, the publication of hospital records exclusively, because of their undeniable authenticity, and because it was always practicable to procure a correct drawing of the parts. I have thus thrown together only a few of the results of my experience,—the anatomical characters, morbid alterations, history, and treatment of pendulous tumours,—a class of affections which have not, as far as I know, been separately considered. And I should not, perhaps, have thought of recording these observations, if I did not remember the disappointment I experienced, on consulting systematic works, at a time when these diseases were new to me in practice.

Art. X.—*Observations on Pleuritis and Empyema in Children, with Cases.* By Francis Battersby, M. B., Surgeon to the Dublin Institution for Diseases of Children, Pitt-street.

[Communicated to the Obstetrical Society.]

Notwithstanding the great attention paid of late years to the diseases of children, so little is known generally on the subject of pleuritis as it affects them, that in one of our standard works it is disposed of by the statement, that "there does not seem to be much tendency to pleuritis in the young subject."(*a*)

With this opinion I cannot coincide. As it is, however, one very commonly entertained in this country, I shall consider it necessary to add to the detail of some very interesting cases the results of investigations made by different continen-

(*a*) Maunsell and Evanson on Diseases of Children.

tal writers, who have clearly demonstrated that pleuritis is very common in young children.

The frequency of pleuritis, compared to that of other diseases of children, is not easily ascertained. Of 4012(*a*) patients treated in the year 1846 at the London Royal Infirmary for Children, only three were noted as affected with pleuritis; while of 4158(*b*) admitted in 1845 to the Royal Institution for Diseases of Children, in the district of Wieden, Vienna, seventy-six were cases of that disease.

In London, during the years 1843, 1844, the deaths from pleurisy in children under fifteen years of age amounted to one-sixth of the whole number of deaths at all ages from the same cause(*c*); and of twenty-five(*d*) deaths at all ages from pleurisy, registered in the month of January, 1847, eleven occurred under the age of fifteen years. Facts like these attach to the pleuritis of children a degree of importance very little inferior to that connected with the same disease in adult life.

That even the fœtus *in utero* may be affected with pleuritis would appear from certain cases adduced by Mauriceau, Véron, Cruveilhier(*e*), and Billard(*f*). The infant referred to by Billard having died on the fourth day after birth, presented the costal and pulmonary pleuræ of an obscure red colour, and punctuated. The pleural membrane was thickened, and there existed between it and the lungs cellular adhesions, as closely organized as they are found to be in adults several years after pleurisy. The pleura was also covered with a number of small granulations, and there were adhesions much more recent

(*a*) Report for the Year 1846 of the Royal Infirmary for Diseases of Children, London.

(*b*) *Jahresbericht über die Leistungen des Unentgeldlichen Kinder-Krankeninstituts im Polizeibezirke Wieden.* Vienna. 1846.

(*c*) Sixth annual Report of the Registrar-General.

(*d*) Weekly Tables of Births, &c., registered in London during January, 1847.

(*e*) *Dict. de Méd. et de Chir.* Art. *Pleurisie.*

(*f*) *Traité des Enfants nouveau nés*, p. 545.

than the preceding, for they were still of an albuminous consistence.

According to Billard and M. Ch. Baron(*a*) pleurisy is not unfrequent in infants soon after birth. From the summaries made by the latter of the cases on which his valuable memoir is based, it would seem that pleurisy begins oftener during the first five days after birth, than between the fifth day and first month; that it diminishes in frequency from the first month to the second year; that from the second to the third year it is, on the contrary, more frequent than from the third to the fourth, and especially from the fourth to the fifth year, and that it thence becomes more rare from year to year, more particularly between the thirteenth and fourteenth, up to the fifteenth year(*b*).

M. Baron's researches yet make it probable, that in children below the age of two years the liability to pleurisy is much less than in those more advanced in age, for, of 3392 autopsies of children from one to two years old, indubitable pleurisy was found only in 205, or six per cent.; while in 181 autopsies of children from two to fifteen years old, the pleuræ of 158, or eighty-seven per cent., presented signs of inflammation. The pleuræ, however, says M. Baron, in some of the cases comprised in the latter class, may have been affected previously to the second year, which will diminish in some degree the comparatively greater frequency, as above exhibited, of pleuritis in the second period.

With regard to the frequency of simple pleuritis in children there are great diversities of opinion. Many writers, like Underwood, think that "pleuritis rarely, if ever, exists uncomplicated with pneumonia."(*c*) M. Hache found the pleura inflamed in eighty-one out of 194 autopsies, and in not one of these cases was the pleuritis simple. Mr. Crisp(*d*), in forty-one

(*a*) *De la Pleurisie dans l'Enfance.* (*b*) Ib. p. 53.
(*c*) Underwood on Diseases of Children, 10th ed. p. 426.
(*d*) London Med. Gaz. Dec. 25th, 1846.

autopsies of children under two years old, discovered pleuritis in six; in one it was simple, in five combined with pneumonia; a combination which, according to Valleix, occurs in one-eighth of the cases of pneumonia in children under two and a half months old, and in one-sixth of those under eight months. This writer considers simple pleurisy to be very rare in young children, and Rilliet and Barthez, although admitting that it exists at all ages, state that they found it in an immense majority of cases after the sixth year(*a*); while Barrier, in all his experience, never observed a case of pleuritis independent of pneumonia before that year, and very few between the sixth and tenth, but from the tenth to the fifteenth year it appeared to him to be nearly as common as in adults(*b*).

M. Baron, on the other hand, states(*c*) that coincident pulmonary complications existed in only two-thirds of the cases of pleuritis which occurred in children from one day to one month old; in four-fifths of the cases from one month to one year; and in eight-ninths of those aged from one to fifteen years; whence it would follow, that simple pleurisy is the more rarely met with the nearer the period of puberty. This conclusion of M. Baron's, though opposed to the statements before quoted, is in some degree supported by the opinion of Billard and Berton(*d*), that pleurisy without any pulmonary complication is much more common in very young children than is generally believed.

I am not disposed to agree with M. Baron, that simple pleurisy is so very common in infancy, nor yet with M. Barrier that it is rare before the sixth year; Dr. Stewart(*e*), who fixes the age of three years as that at which "pleurisy becomes as

(*a*) *Traité des Maladies des Enfans*, t. i. p. 165.

(*b*) Ib. t. i. p. 243.

(*c*) *Loc. cit.* p. 59.

(*d*) *Traité des Maladies des Enfants*, p. 335.

(*e*) Practical Treatise on the Diseases of Children. By James Stewart, M. D., New York. 1844.

common as in adults," being, in my opinion, nearer the truth, as will appear from the cases I am about to detail.

Of all the products of pleuritic inflammation in children, the most common, sometimes the sole inflammatory lesion, is false membrane; a turbid serosity comes next in order of frequency; while pus is the rarest of all.

As to the seat of pleurisy, in every case with notable effusion observed by Barrier it was unilateral, except in one case of dropsy after scarlatina. In twelve other cases the effusion existed in one pleura alone, being found seven times on the right and five times on the left side; and of the cases in which the unilateral pleurisy was perfectly simple the effusion was five times on the right and once only on the left side; while in the six cases complicated with pneumonia, the effusion was found four times in the left and twice in the right pleura.

These facts of M. Barrier's square with the conclusions of MM. Rilliet and Barthez, viz.: 1. That pleurisy without any pulmonary complication is much more frequently unilateral than double, and (what is also M. Baron's opinion) somewhat more common on the right side than on the left. 2. That when pleurisy is complicated with pneumonia, it is also more generally unilateral than double, but it is then more frequent on the left side than on the right. These conclusions are not confirmed by my experience. Single pleurisy, indeed, seems much more common than double pleurisy; but in all the well-marked cases, to be detailed hereafter, the effusion, whether combined with pneumonia or not, existed on the left side, which inclines me to agree rather with Dr. Copland, that, "pleurisy in every form, in children as well as in adults, is more frequent in the left than in the right side of the chest."

Barrier, Rilliet and Barthez, and Baron, agree in stating, that the quantity of pleuritic effusion is in general very inconsiderable, and on this account, says Baron, "displacement of the heart must be very rare." In not one of the many hundreds of cases seen by him was it observed, and neither had the

others, in all their experience, an opportunity for witnessing it. The following cases, therefore, of empyema must be considered as very remarkable, especially the first one, on account of the tender age of the patient, the great amount of effusion and of displacement of the heart, and also for its mode of termination in what is called "empyema of necessity," a termination not very rare in adults, but which is also not very common, as may be gathered from the fact, that Laennec never observed it more than once at any age.

Case I.—*Empyema of the Left Side; great Displacement of the Heart; spontaneous Perforation of the Thoracic Wall; Death.*

George Duffy, aged two years and a half, became a patient of mine at the Institution for Diseases of Children, September 11th, 1845. His mother stated that he had been a very fine and healthy child previously to his illness, then of three weeks' standing, and which she attributed to his having fallen on his side, when in play, over a piece of broken crockery-ware. She never observed any appearance of bruise or injury in consequence, but he passed a restless night, and lying on his left, or supposed injured side, he moaned much, as if in pain. The next day he was peevish and disinclined to leave the bed; and this indisposition, along with a slight cough, still continuing, she at length sought advice, not knowing, as she said, what ailed him. I found him in the following condition:

There was increased heat of skin, and some fever; respiration hurried and oppressed; he had an occasional short, dry cough, which had not altered in character from its commencement; he was indolent and disinclined to move about; the expression of his countenance was perfectly tranquil.

The chest being uncovered, the left side was visibly and greatly enlarged, and remained perfectly unmoved during the respiratory effort; and the entire of this side, which was an

inch and a half in circumference larger than the right, presented a remarkable roundness and smoothness, owing to the wide separation and protrusion of the intercostal spaces, as was readily verified by manual examination.

Every part of this side yielded, on percussion, a completely dull, dead sound, and on the application of the stethoscope nothing whatever could be heard in any part of it, except what appeared to be a distant vesicular murmur close to the spine.

The right side of the chest was extremely resonant on percussion, its movements were greatly exaggerated, and the respiratory sounds intensely puerile.

The heart was displaced so as to present behind the sternum; its action was rapid, but its sounds were normal. His usual position in bed was either on his back or left side.

After a fortnight's attendance at the Institution his mother considered him so much improved that she absented herself for a month, at the end of which (24th October) I again saw him in consequence of a tumour which, according to her statement, had made its appearance, four days previously, on the left side of his chest. This tumour corresponded to the intercostal space between the fifth and sixth ribs, being situated somewhat above and behind the usual position of the apex of the heart; in circumference about the size of a half-crown piece; it was slightly inflamed, and very sensitive to the touch, and its centre was prominent. It was quite soft, even at its base, which was not well defined; fluctuation was not distinctly perceptible, but the skin over it became tense when the patient cried. The soreness of this tumour now obliged him to lie on his back or right side.

The enlargement of the left side of the chest was still more marked than before, and the amount of the dislocation of the heart was so much greater that it now beat below, and to the right side of the right mamma, the entire of the chest on the left side, from that point round to the spine, being perfectly dull on percussion; and no sound, normal or abnormal, was

discoverable by the stethoscope, except that in the spinal region before mentioned.

The child seemed withal scarcely to suffer; his countenance was calm, cough very slight, but he remained indolent and heavy. His complexion was sallow, and he perspired at night.

On the 2nd of November the integuments over the thoracic tumour gave way, and there escaped much thin, brownish-coloured fluid, which the friends compared to unboiled flummery. The tumour then subsided entirely, its position being marked by two very small openings, surrounded by a broad, livid redness of the skin, which was widely detached around them, and which concealed the opening through the intercostals.

Having again seen him at the end of a fortnight, I found he was in the habit of perspiring at night about the head, and that he had become much wasted by hectic and diarrhœa; but that he had no longer any tumefaction of the eye-lids and feet, which existed before the empyema opened. The discharge from the chest was not in large quantity, unless when increased by the effort of coughing or of crying.

The heart was now beating at the left side of the right mamma, and the stethoscope indicated no other change. The left side of the chest seemed to be contracting.

On the 1st of December the compressed lung was regaining its natural condition. The sound on percussion in the subclavicular and upper portion of the interscapular region was less dull than before; in other words there was some sonoriety where before there was none whatever. In the latter place there was a sort of hoarse respiratory sound, while under the clavicle a loud bronchial respiration was audible. The heart had retrograded so far as to be now behind the sternum, and its sounds were very perceptible at the left mamma, where before they could not be detected. The left side of the chest was now smaller by measurement than the right, and it was visibly flattened in front beneath the clavicle. He seemed altogether

in a much more favourable state. The diarrhœa had ceased; he had but little dyspnœa; the discharge from the side was good thick pus; and, although he was still in the habit of sweating about the head at night, and the eye-lids were puffed in the morning, he had apparently gained in strength, was able to run about, and to use, as the friends said, "whatever was going."

I regretted very much that I was not permitted again to see this child, although, assisted by my friend and colleague, Dr. M'Clelland, who had accompanied me in my former visits, I made every exertion for the purpose.

Duffy, I learned afterwards, lived till the month of April, 1846.

In the next case the termination was more fortunate; and it is an example of the natural cure of empyema by vicarious secretion from the lungs, a mode of termination first noticed by the late Dr. Greene, and subsequently illustrated by Dr. Robert Mac Donnell, but which, notwithstanding the publications(*a*) of these gentlemen on the subject, I am surprised to find has been totally unnoticed by Dr. Copland in the elaborate article on pleuritis, very recently published in his Dictionary.

Case II.—*Empyema of left Side; Displacement of the Heart; great Contraction of the Side; Recovery.*

Christie Dempsey, a remarkably fine-looking boy, aged three years and one month, complained one evening at the close of the month of July, 1846, of pain in the left hypochondriac region. This pain, for which no cause could be assigned, was followed by fever, raving, great thirst, and complete loss of appetite. Thus affected, he remained for the next month in bed, in which his constant position was on his right side; he frequently moaned piteously, complaining of pain and soreness of the left side of the chest, upon which he often used to lay his

(*a*) See Dublin Med. Jour. vol. xvii., p. 68, and vol. xxvi. p. 448.

hand when asked where he was suffering; and the only method he would allow his mother to adopt for lifting him out of bed, was to place one hand under the nates, while she kept the other on his abdomen, as he could bear no pressure on the chest.

He was also affected with an occasional short, dry cough, and quick and oppressed breathing, which, at times, was distressing. His mother stated, that after he was a fortnight in bed, an ephemeral eruption of red blotches, the size of the top of her thimble, appeared over his body and limbs, and that shortly afterwards his scrotum and legs became tumefied, and so remained for a week. The soreness of the chest, short breathing, and decubitus on the right side, disappeared shortly before she applied to the Institution, in the beginning of the month of October.

The only treatment he had been subjected to, up to that time, consisted of a blister to the sternum, which was applied at the very commencement of his illness.

When brought to Pitt-street, the left shoulder was depressed. The left side of the chest was visibly contracted, and, by measurement, was less than the right side by an inch and a quarter. The left side was also flattened in front at its upper part; laterally the ribs felt in apposition, and they remained almost unmoved during respiration.

Percussion yielded a completely dull sound over the entire left side, and, on auscultation, nothing could be heard but tubular respiration, and sonorous rales in the superior portion of the chest, posteriorly and anteriorly, with bronchophony in the interscapular space.

On the right side the respiratory murmur, mixed with sonorous rales, was extremely puerile.

The heart's sounds were most distinctly heard under the sternum, and but feebly in the præcordial region.

Before his illness he had been in appearance a remarkably fine child, enjoying uninterrupted good health, but was now emaciated and wretched-looking. His skin was flaccid, and of

a dirty pallid colour, with a tinge of jaundice, which had been present from an early stage of his illness. He usually perspired at night about the head, and over the left side of the chest; his bowels were confined; appetite tolerably good. During the day he coughed seldom, but much on lying down at night. During the night he was in the habit of expectorating about a teacupful of thick, yellow, inodorous sputa; his breath was remarkably offensive, smelling like garlic. His mother considering the nature of his cough peculiar, compared it to that of an old man ; this peculiarity, probably, depending on the quantity and looseness of the secretion accumulated in the bronchial tubes.

My colleague, Dr. M'Clelland (who kindly transferred Dempsey to my care), and I, had no hesitation in at once pronouncing this case to be of the same description as Duffy's, which was still fresh in our memory. The treatment we adopted consisted in repeatedly painting the side with tincture of iodine, and administering the syrup of ioduret of iron internally.

In the course of a month Dempsey's health was improved; he had regained some of his vivacity, and had become playful. He could lie on either side indifferently, and he looked better, although his complexion was still sallow and yellowish, and the entire of the left side of the chest remained as dull as before. Large mucous rales alone were audible, without the least degree of vesicular respiration. The night cough and expectoration were diminished. The application of the tincture of iodine irritated him so much, that I now directed frictions with the compound camphor liniment every evening.

On the 14th of December a most remarkable change had taken place; an extensive soft crepitus, like the *crepitus redux* of pneumonia, being very distinctly audible over the entire left side, which now was not more than a quarter of an inch smaller than the right. The ribs no longer felt as if in apposition, and there was considerable resonance on percussion over

the upper half of the side. The shoulder was not so low. His looks were greatly improved; his countenance was more animated; he had gained in strength and flesh. The voice was still resonant behind the scapula.

On the 29th the muco-crepitus was still general over the lung; the extent of clearness on percussion was increased; and the natural respiratory sound was audible in the upper portion of the lung.

2nd January, 1847. The dulness of the lower part of the chest was more limited. Large bronchial rales were now more audible than the previous muco-crepitus. The flattening of the side in front was less remarkable, and there seemed little difference in the height of the shoulders. The heart had nearly returned to its natural position. He still perspired at night, and the sputa, though lessened in quantity, were rather abundant and thick.

On the 5th all bronchial respiration had disappeared; distant sonorous rales were audible, and at the central and lateral part of the left side a sort of crepitus resembling the noise produced by thick parchment when crumpled. This sound seemed quite close to the stethoscope, it occasionally accompanied both inspiration and expiration, and was rendered more distinct by his coughing.

On the 12th this sound was not present, only occasional mucous rales could be detected, which, on the 19th, were again replaced by the dry, parchment-like sound, less marked, however, and only disseminated, as it were, over the central and inferior portions of the side. Both sides were now equal by measurement; percussion detected scarcely any difference in them, and the respiratory murmur, with the exception of some harshness on the left, was equally pure on both sides. The heart had quite returned to its place; he coughed very little; the sputa were very scanty; and he had now become fat and merry.

This child, though he has since had the measles, now enjoys excellent health, and has grown large and stout.

That this was a case of simple pleuritis ending in empyema, which finally disappeared by vicarious secretion, no one, I apprehend, can entertain a serious doubt. The history of its early stage, the subsequent contraction of the side, with displacement of the heart; and the return of the lung in the manner detailed, and of the side, to their natural condition, allow of no other explanation.

Nor should any one imagine that the fine mucous crepitus observed on the return of resonance on percussion, and of partial respiratory murmur, indicated the softening of an hepatized lung. That crepitus, as well as the dry parchment sounds which replaced it, have been lately added to pleuritic *frottement*, as signs indicating the absorption of pleuritic effusions, by MM. Damoiseau(*a*), and Gendrin(*b*), and Dr. R. Mac Donnell(*c*). Damoiseau and Mac Donnell describe the crepitus heard in such cases, as sharp, dry, and exactly resembling that of pneumonia, while M. Gendrin says it is of a humid nature. This discrepancy may be reconciled by the fact of the crepitus assuming different characters, according to the stage of the absorption. Thus, in Dempsey's case, it was moist at first and afterwards dry, yet certainly not of the fine description observed in pneumonia. As to the exact nature of this crepitation, Damoiseau considers it a modification of the pleural friction sound; and M. Gendrin conceives it to be caused by the penetration of air into the portion of the lungs which had been compressed during the existence of the effusion,—a mode of explanation adopted by Dr. Mac Donnell, with this addition, that the latter supposes the cells infiltrated with serum. He says: "If the cells were *fully expanded* and filled with serum, as in the ordinary form of œdema of the lung, the rale would present the loose, subcrepitant character; but, being *partially compressed* and infiltrated, the rale produced by the

(*a*) *Archives Générales*, Oct. 1843. (*b*) Dub. Jour., vol. xxvi. p. 452.

(*c*) Lancet, March 8th, 1845. See also Lancet, Jan. 7th, March 15th, and May 3rd, 1845.

entrance of air acquires the sharp and fine tone heard in pneumonia." As before mentioned, the rales heard by me were by no means of this fine character, but rather produced the impression of their being caused by the air in the bronchial ramifications passing through a tough mucus, such as we are informed by Hasse they are loaded with while the lung is compressed.

This crepitation, whatever be its exact nature, was also present in the following case, which I had the opportunity of observing through the kindness of Dr. M'Clelland.

Case III.—*Empyema of the left Side; Displacement of the Heart; Recovery.*

Ellen Martin, aged four years, a stoutly-formed, healthy-looking child, admitted, February 20th, 1847, into the hospital of the North Dublin Union workhouse, of which she was an inmate, under the care of Dr. M'Clelland.

No accurate account of the history or length of her illness could be obtained; indeed few, on a superficial examination, would be induced to think that her chest was seriously affected. Respiration was rather oppressed, and performed thirty-six times in the minute; she coughed scarcely at all, and had very little expectoration, but seemed much debilitated; the temperature of the skin was low, the extremities cold, and the pulse at the wrist could with difficulty be felt; her face was pallid, but its expression perfectly tranquil; in bed she lay on the left side only, and at once changed to it if placed on her right side; the tongue was red and rather dry.

The left side was more than an inch, by measurement, larger than the right, and was also completely dull on percussion, this dulness extending even to the right side of the sternum, in which position the heart's sounds, nearly inaudible in the præcordial region, were heard most distinctly, and it was possible actually to catch the apex of the heart between the fingers, by pressing them upwards under the cartilages of

the false ribs of the right side, a circumstance to which my attention was directed by Dr. Kirkpatrick.

Inspection of the side could not detect any remarkable dilatation except in the left pectoral region, which seemed very prominent when viewed from behind and from above downwards. During the act of respiration there was scarcely any motion perceptible in the ribs of the left side; their expansion on the right side was, on the contrary, strongly marked; on the former a diffused bronchophony and bronchial respiration alone were audible, together with sonorous rales, which also existed on the right side, where the respiration was otherwise natural, although puerile.

1st March. Pulse was improved, yet still extremely weak and thready in the right wrist, and scarcely perceptible in the left. She could not bear pressure to be made on the right side of the abdomen; cough insignificant.

On the 20th of March she was much better, and was able to lie down on either side indifferently. The fluid was so far absorbed as to have allowed the return of the heart to its natural position. There was a very considerable degree of resonance on percussion posteriorly, as far downwards as the inferior angle of the scapula; anteriorly it was less marked, while laterally the dulness had scarcely altered. The returning respiratory sound was harsh both anteriorly and posteriorly, and accompanied on inspiration and expiration by a dry parchment crepitation, or large crackling sounds. She had lost her previous cough; the fulness of the pectoral region had disappeared; and there was no difference by measurement apparent in the circumference of the two sides.

This child continued to improve rapidly, and in three weeks' time, from the date of last report, was perfectly well, and had quite recovered from a slight contraction of the side and drooping of the shoulder which succeeded the absorption of the pleuritic fluid.

During the first month after her admission into the hos-

pital it was necessary, on account of her great debility, to give her a regular allowance of wine daily. She was ordered a mucilaginous mixture containing acetate of potass, and subsequently the syrup of iodide of iron, along with frictions to the side of an ointment composed of the Ungt. hydriod. potassæ and Ungt. iodinii.

In the following case, to which, in regard to the age at which it occurred, there is nothing similar on record, the symptoms of pleurisy were still more latent than in the one just given; in fact there was not the least cough throughout, no complaint of pain in the side or anywhere else, and the child could assume any position in bed without inconvenience. The peculiar crepitus which accompanies the absorption of the fluid was not observed in this case, as the child passed from under my observation before the period for its recurrence, in consequence of the mother being obliged to join her husband in England.

Case IV.—*Empyema of left Side; Displacement of the Heart; Recovery.*

Mary Anne Hartfort, aged two years, admitted July 2nd, 1847, under my care, at the Institution for Diseases of Children.

On questioning the mother as to the nature of her child's illness, she stated that three months previously, she had had scarlatina, followed by diarrhœa, which had reduced her in flesh very much; that she never afterwards recovered her vivacity and shewed but little desire to be out of bed; and that during the last two days only her breathing had become very short and oppressed.

Having caused the child to be undressed, I at once observed that there was an extensive effusion into the left side of the chest. This side was manifestly enlarged,—it was half an inch larger than the right; viewed from behind it seemed

convex, and smooth laterally; there was a remarkable prominence of the pectoral region, and the entire side was completely dull; the pulsations of the heart could not be detected in the præcordial region, its sounds were most distinct at the right of the sternum; on the left side nothing could be heard but tubular respiration and bronchophony; the respiration, with the exception of being puerile, was natural on the left side. There were seventy inspirations in the minute; pulse 140. She had not had the slightest cough, and was never observed to lie on one side in preference to the other, and of late her ordinary position in bed was on her back. She was much wasted; integuments flabby; complexion pallid; abdomen full; appetite impaired.

On the 7th the respiration was not so much hurried, and on the 17th the left side was scarcely larger than the right. The fulness before observed in the pectoral region was no longer remarkable. The heart's sounds were most distinctly audible between the left mamma and side of the sternum.

On the 22nd, the last time I had an opportunity of seeing this child, she was improved in appearance and in her general health. The sides of the chest were equal by measurement; the heart was beating in its natural position; the expansion of the left side was, however, still defective, but the extreme dulness had diminished under the clavicle, as well as over a part of the side superiorly. The treatment was here the same as in the case preceding.

If these cases, by their having occurred within a brief period, do not indicate a much greater tendency to pleuritis in very young children than is generally believed, they, at least, from their singularity are deserving of notice.

That they were cases of simple primitive pleurisy there can be no doubt, from their history as well as from the admitted and well-known fact, that an extensive pleuritic effusion places the lung out of the pale of inflammation (Laennec, Hasse).

They present some striking peculiarities. In Case I. we have pleuritis produced in an unusual way,—from contusion. Case II. is remarkable for the rapidity with which, after the completion of the absorption, the lung and chest returned to their natural state. Dr. Copland speaks of this contraction *diminishing sometimes*, especially in growing persons, but does not allude to its entire disappearance as even possible. This case also, compared with Case III., goes to shew that the amount of contraction corresponds with the violence of the inflammation. Cases III. and IV. afford good examples of the latent form of pleurisy common in children, more particularly Case IV., in which there was not only no semblance of pain at any time, but there was not the least cough, nor any prominent sign of chest affection: and Cases II. and IV. shew how little reliance, as a guide to diagnosis, can be placed on the decubitus assumed by children with pleuritis or pleuritic effusions, although adults so affected almost invariably lie in the former instance on the sound, in the latter on the disordered side.

In short, all the four cases demonstrate how possible it is to overlook pleuritis and its effects in children, and, consequently, the necessity there is for instituting in every case a careful physical examination, if it be desirable to avoid making gross blunders in diagnosis and treatment.

"Simple primitive pleurisy," say MM. Rilliet and Barthez, "in children above six years of age, is generally a benign disease, and we may be almost certain to see it end in a return to health in such cases as run an acute course;" for, of twenty-one such cases treated by them, all recovered(*a*). Hache, Constant(*b*), Baudeloque(*c*), and Barrier, entertain a similar opinion. The cases I have given seem to corroborate these views, as well as these observations, that such a form of pleurisy

(*a*) *Loc. cit.* p. 166. (*b*) *Gazette Médicale de Paris*, 1836, p. 265.
(*c*) *Lançette Française*, 1837, p. 146.

is most common in robust and healthy individuals. Primitive pleuro-pneumonia, on the other hand, is a more dangerous disease than pleurisy or simple pneumonia; for, in Rilliet and Barthez's practice, two out five of such cases proved fatal; in Barrier's, five out of six; "but the prognosis," say Rilliet and Barthez, "is still more unfavourable when the pleuritis degenerates into the chronic form; and that, accompanied with slight effusion, is much less dangerous than when the latter has produced deformity of the walls of the thorax."(*a*)

There are, however, on record many cases of uncomplicated empyema in children six years old and upwards, as well as in adults, which ended favourably after the occurrence of deformity of the chest, and even after the evacuation of the fluid through the thoracic walls by an opening, whether spontaneous or artificial. Of the four cases, between seven and nine years of age, in which Dr. Hughes performed the operation of paracentesis(*b*), all recovered; and Heyfelder(*c*) likewise operated with perfect success upon three children, aged from six to seven years, yet the disease in one of them was of four months and a half duration, and the fluid evacuated amounted to six pints (chopines). I think, therefore, that the fatal termination of Case I. affords no reason for an unfavourable prognosis, even at a very early age, in simple primitive pleurisy, if proper care be taken with the patient. The empyema, in Duffy, was clearly uncomplicated; the lung, when I saw him for the last time, three months before death, was rapidly regaining its natural condition, and this accompanied with improvement in his general health; but the stupid parents cared not, as they confessed, whether the child lived or not; and, from the time the abscess appeared in the side, they would not listen to medical advice.

I certainly cannot agree with Mr. Crisp(*d*), that simple

(*a*) *Loc. cit.* p. 167. (*b*) Guy's Hosp. Rep. Nos. 3 and 4. 1844.
(*c*) *Archives Gén. de Méd.* 3e série, t. v. p. 59. (*d*) *Loc. cit.*

pleuritis in children is a disease of "great danger;" nor yet with Dr. Copland, that "its effects are the more to be dreaded, the younger the child which becomes the subject of it"(*a*). Of the seventy-six cases treated at the Institution for Diseases of Children in Vienna, but two died.

We are now in some measure capable of judging how far it is correct or not to say, that "there are no diagnostic marks which distinguish the pleuritis of children from other inflammatory affections of the chest during life"(*b*). No doubt pleurisy in children is frequently not only masked by cerebral and other affections, but is deficient in rational symptoms, which, however, are not so constantly attendant upon the pleuritis of adults as to prevent this being often latent in the latter also(*c*).

The slightest attention to the ordinary signs of pleuritic effusions could not have failed to discover the real nature of the cases I have detailed, with the enlargement of the side and displacement of the heart; but, even at an early period, while the effusion is still moderate in quantity, it is possible, according to Rilliet and Barthez, to ascertain the existence of pleuritis in children by means of the same physical signs observable in that disease in adults.

Of these signs pleuritic *frottement* and ægophony (which is at any age one of little value) are the least constant in children, although Rilliet and Barthez state that they have found the latter so early as the second, third, or fourth year. *Frottement* they never detected before the fifth year. These writers, I may add, state, that pleuritic effusion was pointed out in a child of three years of age by the absence of vibration; but this test, as Dr. Stokes very justly remarks, is inapplicable in many cases of girls and boys, previously to the change of voice, the vocal vibration in them not being sufficiently powerful to be felt by the hand(*d*). Before the end of childhood,

(*a*) Dict. Pract. Med., vol. iii. p. 283. (*b*) Maunsell and Evanson, *loc. cit.*
(*c*) Stokes on the Chest, p. 481. (*d*) On Diseases of the Chest, p. 498.

or the eighth year, it is, I think, impossible in any case to detect this vibration.

The most valuable and generally available signs, at an early stage, are, bronchial respiration, feebleness but purity of the respiratory murmur, and dulness of sound on percussion.

These writers explain the frequency of bronchial respiration, which they have oftentimes detected in children from two years upwards, by, 1, the proportionably greater narrowness of the chest than in adults; 2, the greater number of respiratory movements; and 3, the small quantity, in certain cases, of the liquid effusion, a cause exemplified in Case I., in which the bronchial respiration, at first totally absent, appeared when the great amount of the effusion was diminished.

The bronchial respiration of pleurisy differs from the true souffle of pneumonia by its metallic tone, and more particularly by its progress and duration; and it is a general rule, remark Rilliet and Barthez, that when pleuritic effusion supervenes in a child affected with hepatization of a portion of the lung, sonoriety of the chest totally disappears, and all the abnormal signs are heard with greater intensity; thus the souffle becomes greatly augmented in distinctness, sometimes it assumes a cavernous tone, and the voice is so resonant as literally to offend the ear.

Such an association of effusion with hepatization existed, it appears to me, in the following case.

Case V.—*Hepatization; Plueritis; Recovery.*

Ellen Cheevers, aged three years, came under my care in July, 1845. She was affected with pertussis five weeks, and had been seized by it during convalescence from measles. Her countenance was perfectly natural, and, independently of the paroxysms of the hooping-cough, and a rapid and excited action of the heart, there was nothing, at first sight, to attract particular attention.

On examining the chest, the left side was found to be com-

pletely dull, both laterally and posteriorly, and co-extensive with this dulness there was a peculiarly clear tubular respiration and bronchophony distinctly audible. The sound of ordinary respiration was feeble, and mixed with moist rales.

After an attendance of some weeks at the Institution, the affection of the chest had greatly improved, although there remained a dulness of the side, and I lost sight of her until the 23rd of last January, when she again came under my care, in consequence of a smart febrile attack, attended with convulsive paroxysms of coughing, with palpitations. She had dyspnœa, and her face was bluish and puffy. The left side of the chest was completely dull everywhere, except under the clavicle anteriorly, and posteriorly above the spine of the scapula, yet these parts were dull compared to the same on the right side. A leathery creaking sound accompanied both inspiration and expiration on the left side, and there was very distinct bronchial respiration and bronchophony.

On the 27th the bronchial souffle had altered in tone, and was as distinct to the ear as if produced by blowing through a metallic tube, and this sound (which accompanied both expiration and inspiration), along with a clear broncho-ægophony (if I may use the word), was audible over the greater part of the side, posteriorly and laterally. Near the point of the acromion they were, strange to say, perfectly audible, but they were most distinct over the scapula.

The paroxysms of dyspnœa were sometimes so severe at night, that her mother dreaded her being suffocated. She usually lay on the left side, and complained of its being sore. The peculiar tubular respiration and resonance of the voice, as above described, after having continued a few days, were replaced by ordinary bronchophony, and what may be called laryngeal respiration, for it was precisely similar to what was heard on applying the stethoscope over the child's larynx. The continuance of this sound was not long, and about the middle of February there was a harsh respiratory sound and

common resonance of the voice, with pleuritic friction. The dulness on percussion was now much lessened. The fever had subsided, and her general health was improved.

A short time since I ascertained that there was still much dulness on percussion of the side, with a degree of bronchial respiration. Her health was tolerably good.

The peculiar and very remarkable modifications of the voice and respiration, as well as their short duration, plainly indicated the addition of pleuritic effusion to an old hepatization of the lung. The effusion, in consequence of this state of the lung, could not have been to any large amount; and the side did not at any time undergo the least alteration in its dimensions. There evidently remains still a condensation of the pulmonary tissue, yet recovery, in any shape, seemed at first very unlikely.

Of the above signs of pleuritis, feebleness of the respiratory murmur, and dulness on percussion, are alone applicable to the diagnosis of pleurisy in infants, although Dr. Copland says, that "a rubbing or creaking sound is heard on auscultation," and Mr. Crisp likewise asserts, that "the lungs can be heard moving up and down like the piston of a steam-engine." Rilliet and Barthez, as we have seen, think differently, and I must confess I have never heard what I would call pleuritic frottement in infants, unless it was present in the following case, which affords a good example of a form of pleuritis very common between birth and one year, but in which the stethoscopic signs belonged to, I think, the bronchitis alone.

Case VI.—*Bronchitis; Pleuritis.*

Henry Batt, aged five months; admitted January 22nd, 1847; a very fine child; ill with cough since the 17th. The cough is sharp, painful, restrained, and comes on occasionally in fits, which are terminated by shrill screaming. He keeps the head drawn firmly backwards; the features are contracted, and have a painful expression; breathing quick and jerky; abdominal respiration strongly marked.

When a fit of severe coughing comes on he appears in the greatest pain; the face becomes congested, eye-brows contracted, eyes staring and watery, limbs flexed, and hands clenched, and he shrugs and works with his shoulders as if something sharp was sticking in his back.

No decided dulness; respiration is feebly audible, and there are rales posteriorly, giving the impression of the air in the minute bronchial ramifications passing through a viscid fluid. I directed a leech to be placed on the back of the hand, and ordered powders composed of calomel and hippo, with a cough mixture containing syrup of squills and hippo wine.

He was not again brought back until the 26th, as he had obtained almost instant relief from the leech, which had not been applied many minutes when he fell asleep. He was then animated and playful; and the head no longer flexed backwards; cough very slight, free, and unrestrained: the respiration pure, but feeble, as if the lungs were not filled on inspiration.

29th. The respiratory sound is now puerile and natural. He is quite well.

The peculiar symptoms here present are very common in infants, and arise, it appears to me, from pleuritis supervening on acute bronchitis, which in them is, perhaps, the sole cause of the former. The fixed position of the head backwards, lately noticed by Mr. Crisp as a symptom of pleuritis, I have been long in the habit of observing in such cases as the above, and it seems to arise from an instinctive effort to avoid painful motion of the chest, by fixing the ribs, and giving full play to the abdominal respiration. This position of the head in pleuritis may be distinguished from that attending cerebro-spinal arachnitis, or other affections of the nervous centres, by all change of posture in pleuritis being followed by great uneasiness and screaming, while in the latter the infant is not so restless, nor crying constantly, especially when moved or held erect, as in pleuritis.

When pleurisy coexists, as in the preceding case, with acute bronchitis or pneumonia, active treatment is absolutely necessary on account of these latter, but from the tendency of simple pleurisy to be in children subacute, *ab initio*, or soon to degenerate into the chronic form, depletory measures are often, even at the commencement of it, inapplicable.

Constant and Baudeloque consider recovery from simple pleurisy to be the general rule, and that irrespectively of the quantity of effusion, or whether treatment be had recourse to or not. In reference to the latter part of this opinion I can only say, that I am convinced of the utility of the treatment pursued in Cases II., III., and IV., as well as that the total neglect of due care conduced, in a great measure, to the fatal termination of Case I.

Art. XI.—*Contributions to Aural Surgery*, Part III.(*a*)—*Inflammatory Affections of the Membrana Tympani and Middle Ear.* By W. R. Wilde, M. R. I. A., F. R. C. S., Surgeon to St. Mark's Hospital.

Notwithstanding the remarks which we daily meet with in the periodic and "manual" literature of the day,—that the treatment of diseases of the ear is an opprobium to medicine,—the progress which this branch of medical science is mak-

(*a*) Part I., upon the Causes and Treatment of Otorrhœa, appeared in the former Series of this Journal, for January, 1844, vol. xxiv. p. 388. This essay has been twice translated into German,—first by Dr. Von Hasselberg, of Stralsund, in 1846, and afterwards by Dr. Schmaltz, of Dresden, during the present year. Part II., upon the early History of Aural Surgery, and the Nosological Arrangement of Diseases of the Ear, appeared in that for May, 1844, vol. xxv. p. 422.

To students and those commencing the study of aural diseases, who may be familiar with the German language, I would recommend the perusal of the work of Dr. Martell Frank, "*Practische Anleitung zur Erkenntnis und Behandlung der Ohrenkrankheiten*," &c. &c., Erlangen, 1845.

ing is in all probability as rapid as that of the other departments of the healing art.

Among the many causes from which this opinion has arisen, there are two which must pre-eminently attract the attention of any person conversant with the subject, or who will calmly examine into the question. The first is, that heretofore the treatment of those diseases has been committed to the hands of the most uneducated quacks and charlatans, male and female,—persons totally unacquainted with the first rudiments of medical knowledge; the second, that medical men themselves,—most astute and practical physicians and surgeons in all other respects,—treat diseases of the ear certainly in a manner that savours of empiricism, by prescribing nostrums, of both a local and general character, which we know they would never think of using in similar forms of disease in other organs of the body. This latter cause evidently results from want of proper attention to the subject in our schools, and from the practice of prescribing at random for diseases, the diagnosis and pathology of which are unknown to practitioners themselves. To these causes may be added others that, to a certain degree, serve to bias the public mind against the treatment of aural diseases. In many cases, there is either an unconsciousness of the insidious approaches of deafness, or an unwillingness to admit even the possibility of such an occurrence; or, again, there is an apathy and indifference, to a greater or less degree, on the part of those affected with deafness, to seek advice, which is scarcely credible. Persons who, if they suffer the least inconvenience in any of their functions, or the slightest disturbance of the due exercise or healthy condition of any of the other organs of sense, would immediately apply for medical relief, and submit to any, even the most severe form of treatment, will patiently permit the sense of hearing to be greatly impaired, nay, even lost on one side, without making any effort for its restoration. When the lapse of months, and even years, have contributed to confirm

and render incurable such persons, they generally respond to inquiries with regard to previous treatment,—that they did not like to be "tampering" with their ears, or, that they were told nothing could be done for them. It would in no wise conduce to the practical effect to which I hope this paper may tend, to inquire into the causes of these results; I may, however, mention, that medical men themselves have in part conduced to produce this want of faith on the part of the patient, either by direct opinion as to the incurable nature of the disease or diseases known by the symptom of deafness, or by such futile treatment as broke down the confidence of the patient in any form of treatment for diseases of the organs of hearing. It is true that cases of what are termed "nervous deafness," that is, of defect of the hearing function of the acoustic nerve in any part of the internal ear, from paralysis or other causes,—or of those portions of the brain which preside over the functions of hearing, or give origin to, or are connected with the portio mollis of the seventh pair of nerves,—in fact, such cases as are analogous to amaurosis,—are as intractable as that disease of the eye;—yet I fear not to reiterate the assertion which I made upon a former occasion, that if the diseases of the ear were as well studied or understood by the generality of practitioners, and as early treated, as the diseases of the eye, it would be found that they were just as much within the pale of scientific treatment.

Notwithstanding that we have now several special works upon aural surgery, as well as some valuable monographs in the cyclopedias and periodicals, it is to be regretted that the modern Systems of Surgery contain but scanty information upon the subject of diseases of the ear.

The following passage from M. Druitt's well-arranged work (which is an exception to the class), is so apposite to the foregoing observations, that I insert it: "Deafness is so common and so distressing an infirmity, and when of long standing, is so incurable, that we cannot too strongly urge all medical prac-

titioners to make themselves familiar with the treatment of diseases of the ear. They should also encourage their patients to apply to them for the relief of *slight* and *incipient* ailments in this organ, instead of allowing them to go on till they become permanently deaf, and then letting them fruitlessly seek relief from ignorant and mercenary quacks."(*a*)

With these preliminary remarks I beg leave to lay before my readers some observations upon the inflammatory affections of the external membrane of the tympanum. Before, however, I enter upon the description of these diseases I feel it incumbent upon me again to offer a few observations with respect to the best method of conducting an aural examination, the only true mode of arriving at an accurate diagnosis; and I shall confine my observations as much as possible to those means which are especially requisite in the diseases about to be considered. I suppose the practitioner perfectly familiar with the normal and healthy condition and appearance of the parts, particularly the membrana tympani.

METHOD OF EXAMINATION.

Passing for the present the subjective symptoms, which will best appear in the words of the patient, in the course of this paper, let us inquire into the best method of forming a diagnosis from the physical signs which are present. The patient being placed opposite to a strong, direct sun-light, with the head inclined at such an angle that the sun's rays may fall directly through a tubular speculum upon the membrana tympani, we first carefully observe the condition of the concha, external meatus, mastoid process, infrazygomatic region, and that situated immediately below the lobe of the ear; *the auricle*, its various folds, its colour, its temperature in particular, its thickness as learned by grasping its hem or helix between the fingers, and the angle which it forms posteriorly with the cranium(*b*); then

(*a*) Druitt's Surgeons' Vade Mecum, p. 382.

(*b*) Acquired as well as congenital malformations of this portion of the au-

the position, size, shape, and colour of the *external meatus*, as seen without altering the relation of the parts(*a*). The upper rim of the helix should then be grasped between the finger and thumb of one hand, and drawn upwards, backwards, and outwards, while the thumb of the other hand placed in front of the tragus, by drawing it and the integuments forward upon the zygoma, exposes the outer third or more of the auditory canal to view. The finger should then be pressed deeply and firmly upon the moveable root of the *tragus*, and backwards into the depression between it and the articulating surface of the jaw. While the finger is retained in this position the patient should be desired to open and shut the mouth, and the amount of pain or inconvenience experienced by the pressure in those two different positions of the jaw accurately noted. The middle and fore-fingers should likewise be inserted deeply behind the ramus of the jaw towards the styloid process, and notice taken of the sensations there experienced.

The *mastoid process* in an especial manner claims our attention, where we have reason to believe inflammatory action exists. Its colour, size, shape, temperature, may be learned by even a cursory examination; but, besides this, it should be most carefully pressed upon with a couple of fingers, with a much greater degree of force and firmness than is usual in making examinations of the like nature elsewhere; and not only should this examination be applied to the mastoid region, but to the whole posterior and lateral portion of the head, if

ditory apparatus are not uncommon. Among the various methods adopted to distort this beautiful acoustic instrument, so admirably formed and adapted for collecting and transmitting sound, may be enumerated the pains effectually taken by old ladies to obliterate all the folds of the external cartilage, by tying it close to the head with a tight band, and continuing this distorting process without intermission for years together.

(*a*) Without any recent or manifest disease the external meatus may, instead of presenting an irregular ellipsoid, be converted into a mere slit by the pressure of the tragus backwards, or it may be preternaturally dilated, or we may find it affected by stricture.

we have reason to suspect any inflammation, or its effects. The insertion of the sterno-mastoid(*a*), as well as the upper third of that muscle, should also be carefully examined in the same way. If the integuments and soft parts are swollen or œdematous, as is frequently the case in certain inflammatory affections of the ear, as also where they have become thickened from long-continued disease, it will require a considerable degree of force to make a perfectly satisfactory examination. The amount of pitting made by the finger during this examination, and its degree of permanency, are also circumstances of value in the formation of a diagnosis. Percussion of the mastoid process, immediately behind the attachment of the auricle, occasionally affords some information, as will be shewn in some of the cases hereafter to be detailed.

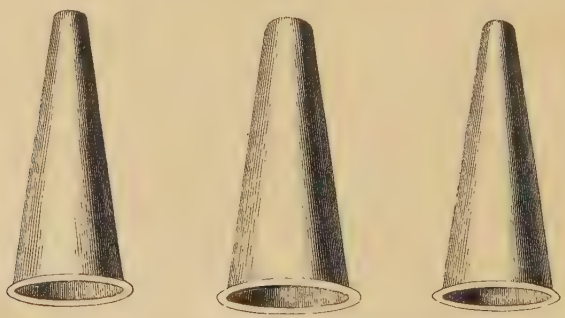
We next proceed to inquire into the condition of the *auditory canal*, and external surface of the membrana tympani. To effect this, and to explore every portion of the surface of these parts, it is necessary to resort to the mechanical assistance of the speculum(*b*), first taking care to remove any im-

(*a*) There is a small gland, in shape and size like a horse bean, situated immediately behind the auricle, over the middle of the mastoid process, which frequently becomes enlarged during the progress of aural inflammations. It is also the seat of violent neuralgic pain in some instances.

(*b*) From a long and most extensive use of the tubular speculum, which I was the first to introduce into this country (see Essay upon Otorrhœa), I am convinced that it is not only the simplest, but also the most effectual instrument for examining the condition of the membrane of the tympanum and the external auditory canal. Various instruments constructed with divaricating arms, tubes with prisms, and divers lamps, have been recently invented, and their virtues set forth in graphic terms by their inventors and supporters, but they are all comparative failures, and for the following reasons: divaricating instruments cannot enlarge the osseo-cartilaginous portion of the canal near the tympanum; the prisms are totally unnecessary, and even disadvantageous where direct light can be procured. The various lamps possess these two radical defects: the light which they transmit throws a peculiar lurid glare upon the entire of the parts which they illuminate; and although an irregularity of surface, a polypus, an aperture in the membrana tympani, or the like, may indeed be detected, yet shades of colour, vascula-

paction of wax, accumulated discharge, or other mechanical impediment which may exist and obstruct our vision. If this obstruction is complete, and that we have reason to suppose that it is the chief cause of deafness, the employment of a syringe and some plain warm water is the best mode of removing it; but if the obstruction merely co-exists with other, and particularly some of the inflammatory affections of the meatus or

rity produced by inflammation or congestion, slight opacities, minute points of morbid deposit, and slight ulcerated abrasions, want of polish, and loss of transparency, &c., cannot be detected by their means. Again, although we were able to detect an ulcer, a granulation, or a perforation, we are not able, while the eye is fixed upon the spot, to apply any direct remedy to the parts affected,—to pass down a porte-caustic, a forceps, a snare, or a camel-hair brush, &c., through this lamp. How, for instance, could a hair, no uncommon cause of annoyance, be removed off the surface of the drum but through one of these tubes? No obstetric practitioner thinks of examining the os uteri or the surface of the vagina with a lamp, so long as the sun's rays can be directed through a tubular speculum to the parts affected. The accompanying illustration exhibits the forms of specula which I still find to answer every useful purpose.

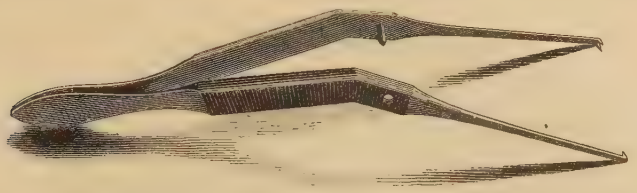


It is unnecessary to blacken the interior of the speculum, and the shorter it is made the more easy will it be found to employ instruments upon the membrane of the tympanum, or the lower portion of the passage, through it. By means of these tubes, employed, as I have directed in my former essay, with bright direct sun-light, every portion of the meatus and the membrane of the drum may be as clearly and accurately investigated as the surface of the eye. There are cases, however, in which a lamp may be employed: they are those in which it is imperatively necessary to examine the ear on a very dark day or at night. It is of great consequence that, in

tympanal membrane, or if it be only partial, and consists of portions of detached cuticle, hairs, or scales of hardened, inspissated cerumen, it is better to remove these gently with a pair of fine forceps(*a*), because the very act of syringing, even with warm water, causes in a healthy ear an increased vascularity, which will in a diseased ear mask the actual amount of disease present. The same observation applies also with respect to slight otorrhœa, but if there be much discharge present we must have recourse to the syringe. The form, curvature, colour,

making these examinations, the shadow of the operator's head should not fall within the sphere of the speculum. It should be a little above or a little below it, according to the sun's elevation at the moment.

(*a*) Having found that the handles of the instruments introduced through the tubular speculum and the fingers of the operator interfere to a certain degree with the direct sun rays, I have latterly had instruments constructed with an angle in the shaft, as shewn in the accompanying view of a pair of ear forceps,



the utility of which is at once manifest. In the same way I have improved upon the snare for removing polypi, as shewn in the accompanying cut. In making this instrument, the loops at the side and the holes at the top should be made very smooth and their edges bevilled off, so that the wire will not scrape or cut in running through them.

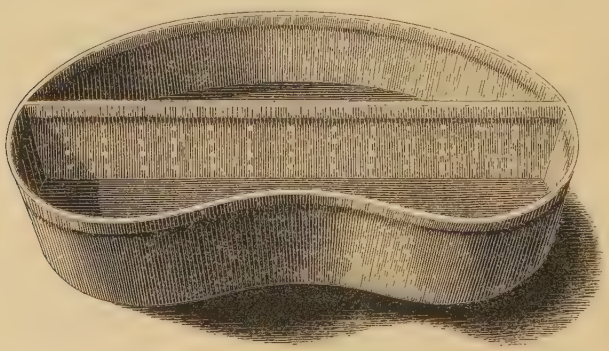
All ear instruments should be constructed upon a like principle.

For syringing the ear I have found the form of vessels represented on the other side very useful: it is six inches long, four broad, and two deep; its

polish, vascularity, and the secretion of the entire auditory canal, should be accurately observed.

Having brought the whole of the auditory canal and the entire of the *membrana tympani* under our view, we must take accurate note of their colour and relative positions. The tympanal membrane, in an especial manner, claims our attention; not only its *superficial colour*, but its degree of *transparency* or *opacity*, its *tenuity* and *thickening*, its *vascularity*, and the *arrangement and position of its vessels* in every part,—its *tension*, *flexibility*, *polish*, *curvature*, and the position both to the interior of the cavity of which it forms the outward boundary, and also to the handle of the malleus, both above and below the attachment of this bone, should be carefully observed(*a*). While the membrane is thus within the field of the speculum, the patient

concave part fits accurately the curve beneath the lobe of the ear; and the perforated septum strains the clean water from the dirty.



Simple as the operation of syringing appears, it requires some caution and dexterity in its performance.—While the patient holds up the pan, the helix of the auricle should be grasped with the left hand, so as to straighten the auditory canal, and then a proper brass syringe, with a pair of large loops attached to its upper extremity, through which the fore and middle fingers of the right hand are passed, injects a steady stream of water, by the thumb working the piston. In some persons the act of syringing, and in others the mere introduction of a speculum, induces violent paroxysms of coughing.

(*a*) The membrane of the tympanum is, as I have already stated, not

should be desired to try and press air into the drum by holding the nose, shutting the mouth, and making a forced expiration(*a*). This manœuvre should be resorted to several times, if the first be ineffectual, as some degree of tact on the part of the patient is necessary to test the experiment. While the air is thus pressed into the drum we should note accurately whether the membrane vibrates, or its tensity is altered, and if so, whether it regains its original position suddenly or gradually. The patient's own sensations should likewise be taken into account in this matter. It is also especially necessary carefully to observe the degree of vascularity produced by this inflation, as well as the course and position of the vessels which cause such vascularity(*b*), and if a small aperture exist in the membrane which may have escaped the eye, we may then readily detect it both by sight and hearing. By this means we often detect a small perforation in the membrane, which, from its minuteness, or owing to the part being thickened or coated with discharge, had previously escaped our first mere ocular inspection. If such exist, we shall then see its open everted lips sometimes pressing out mucous discharge, and also hear a peculiar whistling sound, which the air makes in passing through this narrow

what it is described in anatomical works, concave on its outer aspect, but presents in the normal condition a number of curves, the most prominent, however, of which is that presented by its inferior and anterior portion, below the attachment of the malleus, which is a *decided prominent convexity*, as may be seen, not by inspection of the dead subject or an anatomical preparation, but by examining the parts in a living, healthy ear. Any deviation from this condition is the result of disease, and attended with more or less impairment of hearing, as the alteration in the curves of the media of the eye are attended with certain peculiarities of sight, as I have already explained in my second contribution to aural surgery, p. 431. See also the Dublin Dissector, fifth edition, p. 673. The normal colour and consistence of this membranous septum is very like that of fine gold-beaters' skin.

(*a*) The sound thus produced very much resembles that of a dried bladder suddenly inflated into air.

(*b*) In several healthy ears, if this experiment is made two or three times, we seldom fail to recognise one or two vessels becoming filled with red blood along the course of the malleus.

aperture. There are some cases of perforate membrana tympani, where, from obstruction in the upper part of the Eustachian tube, or granulations in the middle ear, this cannot be effected. If the patient be able to inflate the tympanum by this method, we may then remove the speculum, and, applying our own ear, either directly or through the intervention of a stethoscope, over the external auditory passage, the same method of inflation should be again had recourse to, and the peculiarity of sound which is thus produced in the middle ear, whether the ordinary normal rush of the air into the tympanum, or a prolonged squeeling or gurgling sound, such as might be produced by any contraction in or thickening of the walls of the Eustachian tube, or by dryness, or by accumulation of mucus in it or in the cavity of the tympanum, is heard. The stethoscope should also be applied over the mastoid process, and the same series of observations made upon the sounds, if any, produced there.

If the patient be unable to inflate the tympanum, and that we have reason to suspect some obstruction of the *Eustachian tube*, or an accumulation of mucus, blood, pus, or other matter, in the tympanum, we may then, should the case require it, proceed to inject air, by the mechanical means of a catheter and pump, through the Eustachian tube(*a*) into the cavity of the tympanum, while we carefully note the result by means of a stethoscope, or the ear applied externally. It must, however, be particularly borne in mind, that if the patient is labouring at the time under acute inflammation of the drum or its membranes, or the lining of the Eustachian tube, the catheter is not only inapplicable, but highly injurious. The effort of coughing, sneezing, blowing the nose, and deglutition, in causing or increasing pain, is also to be particularly attended to.

There are two methods of examining the ear, on which, from their frequency in this country, I am induced to make

(*a*) I have latterly found it very seldom necessary to resort to this operation, as the cases in which it is applicable are of much greater rarity than is usually supposed, or as the works of aurists would lead us to believe.

some remarks, in the hope of putting a stop to practices not only useless, but in some cases highly injurious. I allude to the common resort of syringing, and also of probing the ears indiscriminately, and without proper inspection of the parts. The former is of daily occurrence. A patient labouring under deafness, or, what perhaps is worse, violent pain in the ear, is examined either with the unassisted eye, or by means of some of the old divaricating specula, most probably in a badly-lighted apartment,—at all events, without the membrana tympani being brought into view, a dark cavity being all that the explorer has been able to perceive,—it is deemed advisable to try what might come out by squirting hot water into this dark passage for the ensuing quarter of an hour; but, nothing satisfactory following this operation, the diagnosis that there is no wax in the ear is accordingly made. Now, there may be a collection of cerumen, which may not be got rid of by this operation; while, if the cause of the pain or deafness is owing to an inflammatory condition of the auditory canal and its membranous extremity, a decided increase of the symptoms is produced by this unnecessary and cruel proceeding. Again, I have frequently seen inflammation produced by unnecessarily syringing an ear where no wax was present.

The practice of exploring an ear by means of a probe I cannot too strongly condemn, and yet that it is frequently resorted to surgeons are well aware. To introduce a probe down to the membrana tympani, without having that membrane fairly within view, and without a speculum being passed down to it, but merely for the purpose of satisfying the examiner as to whether the membrane is perforate or not, is, I think, a most unjustifiable proceeding.

The degree of *deafness* may be measured by holding an ordinary watch near the external meatus, and the distance at which the tickings can be accurately counted, and at which the patient is conscious of an interval between these sounds should be recorded. To effect this properly the watch should be ap-

proached gradually to the ear till it gets within the hearing distance, and again applied directly to the auricle, and gradually removed to some distance. It is absolutely necessary, if we wish to watch the progress of a case, not only to make these observations with great care, but also to make a written note of the *hearing distance* the first and each subsequent time we see the patient(*a*). By this means we have the most satisfactory report of the progress of the case, both to ourselves and the patient. We should also test the hearing with the mouth open as well as shut. This test of the hearing distance should be tried both before and after the inflation of the tympanum, as in many cases that act will produce a very material difference in the amount of hearing. The watch should next be applied both behind and in front of the auricle, and to the forehead, and also placed gently between the teeth of the patient, and the amount of hearing thus obtained likewise noted.

The state of the *throat*, the arches of the palate, uvula, tonsils, and back of the pharynx, should next be inquired into, particularly as regards the state of the mucous membrane, its colour and degree of relaxation. So also with that of the nose. The fore-finger should then be introduced far into the mouth, and its point made to press firmly upwards and outwards against the arch of the palate, opposite the mouth of the Eustachian tube, and notice taken of the degree of pain or inconvenience it produces in the middle ear.

I have thus described the routine of examination that will be found most practically useful. Having proceeded thus far

(*a*) Various instruments, producing a ticking sound by means of clockwork, have been invented, by Schmalz and others, for this purpose, but the watch is quite sufficient. It must be remembered that there is almost as great a difference in the normal hearing distance as there is in the seeing distance, even among persons who have never laboured under any disease of the ear, and who are not at all conscious of any defect of hearing.

The degree of hearing with a watch is sometimes deceptive; some patients who cannot hear a watch or even a clock, will hear the voice, even in a low tone; but these are the exceptions to the rule.

we may inquire into the history of the case, its duration, probable cause, and subjective symptoms, the pain, noise, &c., in the usual manner in which we would proceed to examine any other medical or surgical case. There are, however, two inquiries which should be particularly made: first, as to the probable hereditary nature of the complaint; and, secondly, as to the existence of *tinnitus aurium;* and, if such be present, what are the peculiar characters of it; how many kinds of noises are experienced; whether they are permanent or intermitting; under what circumstances they are decreased or diminished; and, above all, whether the patient refers them to the ears or the interior of the head; and whether one or both ears are equally affected by them.

While inquiring into the amount of deafness, and the circumstances under which the hearing is increased or diminished, we should learn whether it be improved or not when the patient is exposed to loud noises, as when standing in a mill, walking through a crowded street, or travelling in a carriage, &c. The general health of the patient, the performance of all his functions, and the endeavour to ascertain how much of the disease is purely local, or dependent upon some constitutional affection, will, no doubt, occupy the attention of an educated physician or surgeon, so that it is unnecessary here to call special attention to these circumstances.

In the foregoing remarks, which are chiefly intended as a guide to those who may be inclined to study aural diseases, I have confined them as much as possible to such as were applicable to the formation of a diagnosis in the inflammatory diseases of the ear or their results.

AUTHORITIES.

To review all the opinions of authors in a communication intended solely for practical purposes, and for the readers of a periodical, would savour more of the System or the Cyclopedia than the occasion demands, or our space permits. Let the ollowing references, therefore, suffice.

Myringitis, or inflammation of the membrana tympani, has not been recognised or described by authors until within the last few years: and its varieties, with their peculiar symptoms, are by no means accurately understood. Itard, one of the earliest and most esteemed writers upon aural surgery, has not mentioned it, though the symptoms of at least one form of the disease are enumerated by him under the head of internal otitis(*a*). The old divisions of inflammation of the ear into otitis externa and interna do not in any way assist either our diagnosis or improve our treatment of these diseases. The same may be said of the divisions into acute and chronic. The otorrhœa, which follows in such cases, and which formed, with many writers, grounds for nosological arrangement, being but a symptom, like leucorrhœa in the female, is an insufficient ground of diagnosis.

Lincke, whose work is well worthy of being translated into English, classes the aural inflammations according to their causes, as the erysipelatous, scrofulous, syphilitic, rheumatic, catarrhal, morbillose, variolous, scarlatinous, &c., &c.; but the exact locality or seat of the original inflammation, or the peculiarity of the appearance of such, is not specified. These are merely enumerations of diseased actions, generally characterized by muco-purulent discharge, attendant on, or following these different affections. The Leipzig physician, however, was one of the first accurate describers of the "*Entzündung des Trommelfells*," the true Myringitis(*b*).

Kramer devotes a chapter to the consideration of acute inflammation of the membrana tympani, but upon a careful perusal of it we find about three pages devoted to the description of that disease, while the remainder is occupied with the consideration of polypus, and a detail of the various methods recommended for performing perforation(*c*).

(*a*) *Traité des Maladiés de l'Orielle et de l'Audition.* Deuxieme edition, Paris, 1842.

(*b*) *Handbuch der theoretischen und praktischen Ohrenheilkunde.* Leipzig, 1837.

(*c*) The Nature and Treatment of Diseases of the Ear, translated by

Mr. Pilcher disposes of the inflammation of the membrana tympani in a few pages, but enumerates most of the symptoms of the affection (except the minute appearances of the membrane), under the head of otitis interna(*a*).

Mr. J. W. Jones, in the article "Ear and Hearing, Diseases of," in the Cyclopedia of Practical Surgery, has given a short description of one form of the disease. I cannot, however, agree with him, that in "otitis interna morbid changes occur in the membrana tympani only when it is threatened with bursting by the matter accumulated in the cavity of the tympanum, and has also become involved in the inflammatory action." On the contrary, my experience leads me to believe that inflammation of the middle ear always, and at the very commencement, is shewn by the appearance of the membrana tympani; and this observation must remain undisputed until a sufficient number of accurate examinations shall have been made, in the commencement of cases of otitis interna, to negative it. I may affirm the same of ear-ache, otalgia, neuralgia of the ear, &c.; but of this hereafter.

It is quite plain from Dr. Williams's account of the "inflammation and ulceration of this membrane," that he never *examined* the membrane in this condition. Indeed, I doubt if he ever *saw* the disease under consideration(*b*).

Dr. Copland, in his compilation of aural affections, has quoted the best authors on this subject, and may be consulted with benefit(*c*).

Dr. Martell Frank has lately given a concise but faithful description of both the acute and chronic form of the disease(*d*).

Dr. J. R. Bennett. London, 1837. See also his recent work, *Beitrage zur Ohrenheikunde*. Berlin, 1847. I shall refer to this latter farther on.

(*a*) A Treatise on the Structure, Economy, and Diseases of the Ear. London, 1838.

(*b*) Treatise on the Ear, including its Anatomy, Physiology, and Pathology. London, 1840.

(*c*) Dictionary of Practical Medicine, &c.—Articles Ear, and Hearing. Parts III. and IV.

(*d*) Already quoted at note, p. 382.

M. Hubert-Valleroux does not even enumerate the inflammation of the membrana tympani in his catalogue of aural diseases(*a*).

Schmalz has done little more than glance at the disease. He has evidently mixed up the description of its symptoms with those of other inflammatory affections of the ear(*b*).

I have connected, in the heading of this communication, the inflammations of the membrane of the tympanum with those of the middle ear, because I do not believe it possible for one to exist independent of the other for any length of time, no more than an ophthalmia can be circumscribed: or than we can by the term iritis define simple uncomplicated inflammation of the membraneous diaphragm of the ocular chamber.

When I first commenced the study of aural diseases, I believed that the deafness and tinnitus, in most cases where I had no positive evidence of disease in the meatus or membrana tympani, was caused by some defect in the nerve of hearing, or what is termed "nervous deafness." As, however, my field of observation extended, and as my knowledge of the healthy appearance of the membrane improved, I gradually began to find that the instances of deafness with *perfectly healthy* tympanal membranes which fell under my observation were comparatively few, while I became daily familiarized with a variety of pathological appearances in these structures, which I am now fully convinced are the result of different forms of inflammation of an acute or chronic nature, arising from some idiopathic or specific cause. These appearances have naturally led me to pay particular attention to those diseases in their early stages, the only period in which, in most of them, art can be of any avail(*c*). These appearances I shall endeavour to describe in the following essay.

(*a*) *Essai Theorique et Pratique sur les Maladies de l'Orielle.* Paris, 1846.

(*b*) *Erfahrungen über die Krankheiten des Gehöres und ihre Heilung.* Leipzig, 846.

(*c*) If we examine the inmates of a blind asylum we are at once struck

Mr. Toynbee, in his very valuable contributions to the morbid anatomy of the ear, published in the Medico-Chirurgical Transactions, has shewn the frequency of lesions of the middle ear, the result, no doubt, of inflammatory action; it is, however, to be regretted that the symptoms exhibited during life by the persons from whom his preparations were taken have not been recorded(*a*).

Dr. Kramer, in his late work, *Beitrage zur Ohrenheilkunde*, has given an extensive statistical table of diseases of the ear. The number of cases which he has recorded amounts to 2000, but of this number it must be remembered that 208, or one-seventh of the whole, were diseases of the auricle and external auditory passage. He includes all the diseases of the tympanal membrane with those of the external ear, whereas in my opinion they belong equally, if not more so, to those of the middle ear; indeed I believe that the chronic as well as the acute inflammation of the membrane is accompanied by disease in the middle ear more frequently than disease in the auditory passage. Of the 2000 cases observed, the inflammations of the tympanal membrane amounted to 442, or something less than one-fourth of the whole. Of these cases 45 were acute, and 397 chronic inflammations. About one-twelfth of the whole, or 164 were inflammations of the middle ear, but which he does not tell us were originally connected with, or subsequently produced changes in, the tympanal membrane. If in these 164 cases the inflammation of the mucous membrane of the middle ear was confined to that lining the bony parietes of this cavity: not extending over the extensive surface stretched over the back of the membrana tympani, not propagating inflammatory action there,

with the fact that nine-tenths of the cases of loss of vision there presented are the result of inflammatory action; the cases of pure unmixed amaurosis are comparatively rare, either on account of their actual scarcity, or because the patients so affected have already been carried off by the cerebral disease which was the original cause of their blindness.

(*a*) Med. Chir. Trans., vols. vi. and viii., second series.

and producing the effects of inflammation upon transparent or diaphanous membranes, as we see it does upon the aqueous membrane lining the back of the cornea, then have we no analogy for such a state of things in any of the other departments of pathology? To these 164 cases of inflammation of the lining of the tympanum, he has added thirty of alterations in the Eustachian tube, and four of inflammation of the periosteum; in all, 198, or one-tenth of the whole. Among the diseases of the ear he has included 46 instances of deaf-dumbness. With most of these statistics we find no fault; and to the various tables exhibiting the causes, ages, sexes, &c., we must, in common with all who will examine them, award to the zeal and industry of their author the amount of credit which they deserve.

When, however, we come to examine into the chief cause of deafness enumerated by the Berlin aurist, we at once perceive that his favourite theory of "nervous deafness" has been pressed into the service, and this item made to exhibit a magnitude which we have strong hopes of seeing Dr. Kramer himself one day criticise with more severity than we are now willing to do for him. Of the entire number of cases recorded, 1028, or somewhat more than one-half of the whole, are set down as "*Nervöse Taubheit.*" It would occupy more space than we are able to devote to this portion of the subject, to enter at any length into a discussion calculated to shew the fallacy of the reasoning adduced by the author to satisfy his readers that these were absolute cases of nervous deafness. The most that can be said of these 1028 cases, many of which must, we doubt not, have been caused by affections of the auditory nerve, is, that in these the parts capable of inspection exhibited no symptoms of disease. In which case, he says, "the use of the ear-catheter is the only means, either by blowing through it, or by injecting compressed air from the air-press, or by the introduction of a catgut string, or a small whalebone, or ivory probe, to learn the condition of the Eustachian tube and the cavity of the

tympanum, and thereby, in the cases in question, to judge of the condition of the auditory nerve,"—p. 26. But even this hazardous mode of making an examination,—by introducing a foreign substance into the cavity of the tympanum!—is at best but a negative proof. By it the condition of the ossicula, the membranes of the fenestra ovalis and the foramen rotundum, the fine mucous membrane, with its nerves, lining the tympanic cavity, the state of the labyrinth and the internal ear, or the brain, *cannot be investigated*(*a*). Is there any other organ of sense in which the affection of the nerve bears the same proportion to all the other diseases of the part as this?—would any table of the affections of the eye be acknowledged as authentic, in which more than one-half of the diseases of that organ were ascribed to amaurosis, or amaurosis not consequent upon some inflammatory condition?

The accompanying table of 708 cases of aural disease, registered at St. Mark's Hospital during the last three years, although, no doubt, liable to the defects under which the investigation of these diseases still labour, gives, without going too minutely into the subject, a tolerably good idea of the proportion of the inflammatory to the other diseases of the ear, most common among the lower orders of Dublin.

The details of this table are to be found in the annual reports of the institution. During the year 1834-35, I was not as

(*a*) I have heard of cases in which the middle ear has been said to be explored by such mechanical means, even in this country, and I have been shewn steel sounds manufactured for the purpose. Such instruments are, however, with the exception of the tearing and inflammation which they may cause in the nasal extremity of the Eustachian tube, perfectly harmless, for they could not by any possibility, even in the dead subject, be passed through the upper end of the Eustachian tube. The only instrument I ever venture to pass into the drum is a fine ivory bougie, rendered flexible by having its earthy material extracted by means of an acid. In employing this instrument, a large-sized catheter should first be passed into the bell-mouth of the Eustachian tube, and the bougie, with about half an inch of its extremity previously softened by immersion in warm water, should then be introduced through the catheter and passed up with great gentleness and caution through the Eustachian tube into the middle ear.

intimately acquainted with the pathological appearances of inflammatory action as I am at present. In the tables published for that year, the cases set down to nervous deafness amounted to thirty-two out of 184; but from the subsequent tables, and more careful examinations, I am inclined to think that the number of cases registered under this head for that period were exaggerated.

Diseases.	Ages and Sexes.										
	Under 5		6 to 15		16 to 30		31 and up.		Total.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Gen. Tot.
Otitis,	3	1	9	3	8	6	9	8	29	18	47
Acute Myringitis,	..	2	4	5	10	9	4	5	18	21	39
Chronic Myringitis,	..	1	8	6	15	15	20	17	43	39	82
Abscess in Mem. Ty.,	..	..	1	..	..	..	1	..	2	..	2
Granular Mem. Ty.,	..	..	..	..	1	1	2	1	3	2	5
Collapse of do.,	..	..	1	1	1	1	1	5	3	7	10
Otorrhœa,	13	8	39	38	31	37	10	9	93	92	185
Do. with Polypus,	..	..	7	5	6	3	2	1	15	9	24
Do. with Perforation,	..	..	1	..	1	1	..	1	2	2	4
Nervous Deafness,	..	1	9	4	11	14	34	21	54	40	94
Tinnitus Aurium,	..	..	..	..	1	7	2	4	3	11	14
Otalgia,	..	..	..	..	1	1	1	1	2	2	4
Hæmorrhage from Ear	..	..	..	..	1	..	..	..	1	..	1
Deafness from Cerumen,	1	2	8	8	14	12	73	43	96	65	161
Chron. Infl. of Exter. Meatus,	..	..	2	1	4	3	..	3	6	7	13
Contraction and Ulceration of do.	..	..	1	..	..	..	..	..	1	..	1
Eczema of Auricle and Meatus,	3	1	2	1	1	2	..	5	6	9	15
Congenital Malformation,	..	..	..	..	1	..	..	..	1	..	1
Deafness from Disease of Throat,	..	..	2	1	..	1	1	1	3	3	6
	20	16	94	73	107	113	160	125	381	327	708

The foregoing Table does not include all the diseases enumerated in my nosology, but for the purposes intended too minute a division would be disadvantageous. From this Table the proportion of cases of nervous deafness to those the result of inflammatory action are but 1 in 5, to speak in round numbers.

I have become acquainted with the following forms of inflammation of the membrana tympani:—

I. Acute inflammation of the membrana tympani, accompanied by inflammation of the cavity of the tympanum; frequently of a rheumatic character.

II. Subacute inflammation, unaccompanied by pain.

III. Chronic inflammation, with or without inflammation of the tympanum.

IV. Strumous inflammation.

V. Syphilitic inflammation.

VI. Febrile subacute inflammation, accompanying the exanthemata and other fevers; generally producing otorrhœa (already described in Part I.)

I. ACUTE MYRINGITIS.—HISTORY AND SYMPTOMS.

In *acute inflammation* of the membrana tympani, the vascularity is generally seated in the true, fibrous membrane of that structure, and is usually the result of cold, and often attributed to rheumatic diathesis: sudden exposure to a low temperature, blasts of harsh cold wind, diving in the sea, foreign bodies, and irritating substances introduced into the external ear, &c. The auditory canal, and sometimes even the auricle, is engaged; and although we are not able to observe the precise pathological condition of the cavity of the middle ear, or its investing membrane, there can be little doubt but these parts, sooner or later, participate in the general inflammatory action. As, however, we denominate that form of internal ophthalmia which chiefly or primarily attacks the iris, an iritis, although in the severer forms of that affection, several if not all, the other textures of the eye eventually become engaged, so in inflammations of the membrana tympani, to which the term myringitis is applicable, we must expect that sooner or later the adjoining structures,—the mucous membrane lining the tympanum, with its numerous nerves, the nerves themselves which cross this cavity, the mastoid cells, the investitures of the Eustachian tube, the membrane of the fenestra ovalis and fenestra cochleæ, the muscles, ligaments, and other connexions of the ossicula,

the labyrinth, the internal ear, and the auditory nerve itself,—must sooner or later participate in the unhealthy action going forward; and must, either directly by the inflammatory lesion, or its subsequent effects, serve to impair hearing, and cause organic changes in this delicate organ. But in addition to the changes analogous to those which occur in ophthalmic inflammations, we have here, from the peculiar anatomical structure of the ear, superadded an extension of disease to parts which not only destroy the sense of hearing but prove dangerous to life, as when the periosteum, the bone, and even the membranes of the brain, or the encephalon itself, become engaged. The dermal structure of the membrana tympani also partakes of the abnormal action, and, together with that of the auditory canal, pours out a muco-purulent secretion, or even pus itself,—is occasionally raised into vesicles, becomes the seat of pustules, ulcerates, throws out granulations, and becomes thickened, &c., during the progress of this disease. The true fibrous membrane passes through all the pathological changes to which such structures are liable from inflammatory action or its results; and although the precise anatomical condition of the two may not be analogous, yet the diseases of the cornea and of the membrana tympani bear a remarkable analogy, particularly in the subsequent appearances of vascularity, thickening, opacity, morbid deposits, &c., which they present, together with adhesions by bands of membrane to the parts within the chambers, to which they form the external boundaries;—while inflammation of the lining of the meatus auditorius, the auricle itself, and the periosteum of the cranium adjoining, particularly over the mastoid process, is a very formidable and by no means uncommon symptom.

The following are generally the order of symptoms. A seizure of sudden and intense *pain* in the ear itself, generally, first appearing at night, and attended with nocturnal exacerbations during the progress of the disease. This pain is of a most excruciating kind, producing at times delirium, and

is usually likened to that of a sharp instrument penetrating through the ear to the brain: this pain, especially when the cavity of the tympanum is injured, is increased by coughing, sneezing, chewing, or swallowing, or by pressing upon the tragus, particularly when the jaw is open. The beating of the carotid is distinctly felt in the ear, and each throb of the artery, particularly if the circulation be excited, increases the suffering. There is also a feeling of fulness, and bursting within the organ frequently; with this, there is pain and soreness over the side of the head, in the teeth, in the eye and temple, and in the superior lateral triangle of the neck; with occasionally stiffness and soreness of the upper portion of the mastoid muscle, and often flying, rheumatic pains throughout the body, particularly in middle-aged persons, and those who have previously suffered from rheumatic attacks. If neglected, or unrelieved by treatment, the pain extends to the throat and mastoid region, and is increased on pressing the mouth of the Eustachian tube with the finger. The severity of the pain experienced is to a certain degree a test of the extent of the inflammation; and the peculiarity of the pain is also a means of judging of the exact seat of the inflammation. If pain is experienced in swallowing, mastication, or sneezing, &c., we may presume that the inflammation has extended to the middle ear.

A very curious impression exists among, and is too frequently acted on by the profession, that ear-ache is a *neuralgic* affection. To this very general mistake must we attribute the practice, so frequently and empirically resorted to, of pouring into the ear the various nostrums, sedatives, and stimulants, calculated to allay pain in external parts. So rare is true neuralgia of the ear, that Dr. Kramer says, he "never observed earache without evidence of inflammation either of the meatus or of the membrana tympani;" although I am not prepared to say that such an affection does not occasionally exist, I must say that I cannot, at this moment, tax my memory with a single instance

of so-called "nervous otalgia," for which I have been consulted, that upon a careful examination I could not discover some direct *visible* cause for it: and I must, therefore, with Dr. Kramer, "deny to those persons the right of pronouncing a decisive opinion on the existence of a nervous otalgia, who do not understand investigating the membrana tympani in bright sunshine, and with the aid of the speculum, and who are not in the habit of doing it."(*a*)

Usually coincident with the seizure of pain, the patient complains of *tinnitus aurium*, and the noises to which this symptom is compared are as various, and the accounts given of them even more incongruous, than those of muscæ in the eye, to which, in some instances, they bear an analogy. These consist of a dull throbbing, or pulsation,—a loud pumping like that of a steam-engine,—with the occasional supervention of a noise, varying in loudness and intensity from the ticking of a watch to the striking of a loud clock; but the most usual simile given by patients in describing those ear-noises is that tidal sound perceived on holding a conch-shell to the ear. In the severer forms of aural inflammation, patients very frequently liken this unpleasant symptom to the falling of water, the dashing of a cataract, or that peculiar rushing sound produced by the sudden escape of water through a large pipe or sluice-gate. In the more mitigated forms, and the more advanced and chronic stages of these aural inflammations, we generally find the sounds of a hissing or blowing character, and usually likened to the singing of a kettle, the noise of a distant storm, the fluttering of the leaves of trees, the chirruping of birds, the distant ringing of bells, a dull cooing in the ear, musical sounds of various kinds, the buzzing of bees, blowing of a bellows, whistling, and other noises of a similar character, for which the fer-

(*a*) Not long ago, a practitioner, relating to me the history of a case of typhus fever which had proved fatal to a mutual medical friend, summed up the symptoms with the enumeration of "abscess of the base of the brain," because he had discharge from the ear, although neither the ear nor the contents of the cranium were examined!

tility of the patient's imagination finds a ready similitude. Any increase of the circulation, or nervous excitement of any kind, particularly in chronic cases, invariably makes these ear-noises worse. We would earnestly call the attention of those engaged in the study of aural diseases, to the subject of tinnitus, as it is more than probable that a knowledge of the peculiarities of this symptom may yet be found to assist in the diagnosis of particular forms of deafness.

Deafness,—consisting either of impaired hearing or total loss of that sense on the affected side, coming on either contemporaneously with the pain, or succeeding it in a few hours after. If, however, but one side has been attacked, the patient is not at first conscious of his loss of hearing. In some rare cases there is for a short time during the progress of tympanal inflammation an exaltation of the sense of hearing, in which (like photophobia in ophthalmia) all sounds become intolerable.

To these local subjective symptoms may be added the following constitutional ones: increased heat of skin, headach with a feeling of weight in the head, sometimes well-marked hemicrania, great distress and anxiety of countenance, sneezing, coughing, and other symptoms of catarrh, sleeplessness, restlessness, some quickness of pulse, occasionally rigors, in some instances delirium, and even, in very bad cases, all the symptoms of cerebral disease, of which Case II. is an example. The digestive organs are seldom much engaged in the progress of the disease; the urine becomes high-coloured, and, towards the termination of the acute symptoms, deposits a copious pinkish sediment. The circulation, except in very severe cases, is seldom much affected.

The objective symptoms, or physical signs, consist, in the severe cases, of heat, pain, and slight erysipelatous redness of the auricle: in very aggravated cases, heat, fulness, and œdema, as well as pain over the mastoid region: in ordinary cases, slight tumefaction of the lining of the external meatus; complete cessation of the cerumenous secretion; a bright pink-

ish colour, and a swelling and polish of the membrane lining the auditory canal, which is streaked with long tortuous vessels: accompanied by heat and itching of that part.

The membrana tympani first loses its polish, then its semi-transparency,— becomes in the early stages, and in very mild cases, of a dull yellow, but this is variable and seldom seen ; the most usual colour varies through all the shades of red, from a slight pinkish hue to that of a dark damask rose tint, and is caused by the different degrees of vascularity produced by the greater or less intensity of the inflammation. Soemmerring has faithfully represented the arteries of the tympanal membrane in the normal condition as two long vessels proceeding from above downwards and backwards along the course of the handle of the hammer, and branching on either side into the anterior and posterior vibrating thin portions of the membrane. During inflammatory action, however, like as in the coats of the eye, new vessels seem to start into existence, and to branch and inosculate till the whole seems one mass of bright or livid red. Generally speaking, the upper portion around the attachment of the head of the hammer is the first to become vascular, the last to regain the natural hue, and the part in which the colour becomes deepest. The vessels along the handle of the hammer are always well marked, though the line of attachment of that bone remains for a long time whitish, owing to the intimate connexion of the membrane to it at this part. Around the circumference of the membrane, within the ligamentous ring, particularly at its lower and anterior part, an areola of short vessels form a circle of almost a line in breadth; they all run towards the centre, and, when well marked, look like the zone seen in iritis, or, which is perhaps a better simile, the zone observed in the cornea in the commencement of cornitis, to which disease the appearances seen in myringitis bear a great resemblance. It is only in the early stages, or when the redness is disappearing, that this peculiar peripheral vascularity is well-marked. With this general

redness may in some cases be seen well-defined patches of ecchymosis, generally on the anterior vibrating portion; and as the vascularity increases, even the exact position of the manubrium cannot be recognised,—all is one red mass. The membrane also becomes swollen, and its surface apparently villous; rarely vesicles, and still more rarely pustules and small abscesses, form on its surface. Ulcers occasionally form upon it; these usually occupy the anterior part of the lower vibrating portion, but I have occasionally seen them situated posteriorly. It is possible that they may have commenced as vesicles or pustules, but we require more extended and minute observations to determine this point. Exudation of muco-purulent secretion, with detachment of the cuticle, both from the surface of the membrane and the parietes of the canal; perforation of the tympanal membrane, either by rupture, abscess, slough, or ulceration, but which it is not always easy to determine, also occur occasionally. The rupture usually takes place in the anterior portion, and close to the opening of the Eustachian tube; sometimes it may be seen as a round or oval hole, about the size of No. 8 shot, and appearing as if punched out of the membrane. In other instances the rupture takes place at the anterior inferior edge of the membrane, in which case the lower margin of the aperture is formed by the parietes of the canal, and cavity of the tympanum. In still rarer instances the rupture takes place in the posterior division of the membrane, below, and somewhat behind, the point or handle of the malleus.

In this condition, with the cavity of the tympanum open, polypoid growths occurring in the meatus, and granulating over the surface of the tympanum and its membrane, and a copious and very often fœtid discharge pouring both from the auditory passage and the drum, the case becomes one of otorrhœa, the peculiar symptoms and management of which I have already detailed in my former Essay.

Besides the peculiar vascular condition of the membrane

already referred to, lymph is very frequently effused between the laminæ, in the substance of its proper fibrous tunic, and there can be little doubt that, in the severe forms of the disease, this morbid product is poured out in large quantity upon the surface of the tympanum, the membrane of which must partake largely of the inflammatory action so visible in the external septum. That these lymphy exudations,—both by thickening the tympanal membrane itself, and by acting in a similar manner upon the lining of the cavity of the tympanum and the parts contained within it, by bands of adhesion within its walls, thus drawing inward and arresting the vibrations of the membrana tympani, curtailing the motions of the ossicula, injuriously affecting the membranes of the fenestræ, and particularly by impairing the functions of those tympanic branches of the glosso-pharyngeal nerves which ramify on the mucous membrane,—are the principal causes of deafness, I have little doubt.

When rupture takes place, and that accumulations of blood, mucus, or purulent matter, pent up within the tympanum, are evacuated, relief is generally experienced.

In cases where neither rupture nor ulceration has taken place, as the disease advances, the vascularity of the tympanic membrane decreases, first in the centre of its vibrating portion, then around its circumference, and finally along the mallear attachment. The membrane assumes a muddy, yellowish, opaque colour; after this clears off we find it opaque throughout, or in spots; sometimes these opacities can be plainly discovered upon the interior of the membrane, like the speckled opacities seen upon the membrane of the aqueous humour. In other cases, the result of the inflammation is seen in the uniform greyish-white opacity, similar to leucoma of the cornea; and in time, as the superficial polish is restored, the membrane presents a pearly aspect very different from the semi-transparent character of the healthy condition.

A not uncommon effect of inflammation of the tympanum

and its membranes, particularly when allowed to run its course unchecked, is a drawing inward of the membrana tympani. In such cases the handle of the hammer forms the most projecting point seen at the bottom of the auditory canal; and the anterior and posterior divisions of the membrane can be distinctly seen forming deeply curved folds upon either side of it. At times the membrane can be elevated to its natural position by inflating the drum through the Eustachian tube; but in such cases, as soon as the pressure from within is removed, it immediately resumes its former position. Considerable discussion has occurred among authors as to the possibility of collapse or falling inward of the tympanal membrane, occurring from shocks or loud noises, &c. This is not the place for investigating that question, but of the existence of the pathological condition which I have thus described, and of its being sometimes the consequence of inflammatory action, I have no manner of doubt. It is a peculiarity I demonstrate to the class at the hospital daily. Mr. Toynbee's dissections confirm my observations on this point, and, in some instances, explain the cause, namely, adhesive bands existing between the back of the membrane and the inner wall of the tympanum.

In anatomical preparations, however, it must be remembered that it is the position that the parts are most likely to assume; and, moreover, it is not an uncommon peculiarity even in persons who have never suffered from any affection of the ear, *of which they were conscious*, and who were not aware of their hearing being in any way impaired until tested by the watch.

The inflammatory process must, in severe cases, also extend into the mastoid cells; the periosteum lining the bony portion of the auditory canal will in time become engaged, as well as the pericranium over the mastoid process, and post-aural region of the skull, and present the appearance, already described. If allowed to proceed unchecked, either by the efforts of nature or art, the death of the bone beneath will follow; while, in cases still

more severe, the entire petrous portion of the temporal bone will become inflamed,—the dura mater will separate from it,—purulent deposit takes place in the cavity thus produced,—the brain, as well as its investments opposite those portions, will partake of the inflammation,—and death follow, either from abscess or diffuse inflammation of the cerebrum or cerebellum.

During the progress of the inflammatory action in the tympanum and its external membrane, the throat, in some cases, becomes engaged its mucous membrane, presenting a copperish red appearance, and becoming swollen and infiltrated. The tonsils also become swollen; there is some difficulty of deglutition; and if an examination of the pharyngeal extremity of the Eustachian tube be made with the finger, according to the method described at page 384, considerable pain is experienced in the track of the tube, as well as in the middle ear. There can be little doubt of the inflammatory condition of the middle ear, extending over the Eustachian tube, and causing such thickening and obstruction of its lining membrane, with, perhaps, an accumulation of mucus, as greatly impedes the transit of air into the drum, and causes that peculiar feeling of stuffing, and occasional sudden bursting in the middle ear, of which we are all conscious when labouring under influenza or catarrh.

The nose sometimes partakes in the unhealthy condition of the neighbouring mucous membrane, and the feeling of stuffing in that part, together with much faucial respiration, is not an uncommon attendant upon acute inflammation of the middle ear and membrana tympani.

In some rare cases, paralysis of the muscles of the face, on the affected side, presenting all the peculiar phenomena of that disease, is produced; an instance of which will be given in one of the cases (although in the chronic form) to be related hereafter. I am strongly inclined to think, that many of the cases of paralysis of the seventh pair of nerves, where we have no mechanical lesion, such as caries or exfoliation,

and which heretofore were usually attributed to cold, &c., may have been caused by some form of otitis; and I would therefore beg to direct the special attention of physicians to the peculiar condition of the ear in all such instances.

This form of inflammation chiefly attacks the young and middle-aged; one ear is much more frequently affected than both; the light-haired and fair-complexioned are more liable to it than the dark. So much more frequent are its attacks in spring than at any other period of the year, that it sometimes seems to be epidemic at that period. The duration of the disease varies from six to fourteen days, but may last a month, and its effects several months.

TREATMENT.

The temperature in cases of acute myringitis should be strictly attended to; the patient should, if possible, be confined to a warm well-ventilated apartment, or if obliged to go abroad, the cold air should be carefully excluded from the ear; but in the severe form of the disease it is absolutely necessary to confine the patient to bed.

Depletion is strictly enjoined, but I have seldom found it necessary to resort to general bleeding. Local depletion is imperatively required, either by cupping or by leeches: the former is not easily managed so near the part affected as to be of much service; in cases, however, of very severe internal otitis, it may be had recourse to, and a dexterous cupper will abstract several ounces of blood from the soft parts immediately behind and beneath the mastoid process; and if the head be much engaged, blood may be abstracted by the same means from the nape of the neck. Leeches are, however, the most effectual means of abstracting blood and relieving pain in all such cases. They should not, however, be applied in the usual manner behind the mastoid process: to be of service they must be applied with a leech-glass immediately around and within the external meatus; in the fossa behind the tragus, and, if necessary, in front of that pro-

minence, in the hollow formed by depressing the jaw(*a*). From four to six leeches may be readily applied around the meatus, and in this situation they will produce more permanent and immediate relief than three times the number affixed over the mastoid region. The application in front of the tragus is also very much more effectual than upon the mastoid region. When, however, the latter locality becomes itself the seat of inflammatory action, they should also be applied freely all over it. Where we have already recently applied leeches in the two first-mentioned localities, and that the parts have thereby become swollen and irritated, the next most advantageous position is beneath the lobe of the auricle, behind the ramus of the jaw. I do not know any painful affection in which leeches applied in the manner directed produce the same amount of immediate relief, as in the disease under consideration. They should be had recourse to again and again, even upon the same day, to relieve paroxysms of pain, as well as to lessen the degree of redness and vascularity observable.

The application of heat and moisture is particularly grateful in such cases; steaming the ear by holding it over the vapour of some very hot water placed in the bottom of a long, narrow vessel, medicated with hyosciamus, opium, belladonna, or with the ordinary decoction of marshmallows, camomile, or poppy-heads, if faith be placed in such, gives great comfort. The Russians employ a peculiar apparatus for relieving pain in the ear, consisting of a funnel-shaped roll of linen, the small end of which is applied to the meatus, while the large end, in which various balsamic substances are placed and set fire to, is allowed to burn down slowly like a moxa. A warm linseed-meal poultice renewed every two or three hours, and particularly applied at bedtime, gives great relief. Stupes and fomentations are not, I find, as efficacious in aural as in ophthalmic inflammations.

(*a*) A morsel of cotton should be inserted into the auditory canal before applying the leeches; this prevents their going in too far, and also excludes the blood, and keeps it from collecting and clogging within the passage.

The bowels should in this, as in all other febrile diseases, be opened, but the condition of the digestive organs does not appear to influence the inflammatory affections of the ear as much as they do those of the eye. The state of the skin, however, which is generally hot and dry, requires our more especial attention; and sudorifics are, in the early stage of the disease, decidedly indicated. Having leeched, fomented, and, if necessary, purged, James's Powder, combined with small doses of blue pill and henbane, will be found very efficacious. Abstinence from animal food, and the use of the pediluvium, together with all such means as are calculated to allay inflammation and febrile excitement, should be had recourse to.

Counter-irritation, by means of small blisters applied upon the bald space behind the auricle, and below the lobe, are advantageous in the more advanced stages of the disease, and after local depletion has been fully employed. Generally speaking, blisters are too much relied upon, or applied too early in the disease; but as it advances they will be found highly useful, and the surfaces which they expose may with advantage be dressed with mercurial ointment.

Having resorted to all those means, we should, if the symptoms,—not only of pain and deafness, but of the redness and vascularity of the tympanal membrane,—remain unrelieved, at once have recourse to the use of mercury. Indeed I am now so fully convinced, not only of the utility, but of the urgent necessity of employing mercury in these aural inflammations, that I do not hesitate to recommend its use in the early stages of all such affections. A pneumonia, a pericarditis, an inflammation of a large joint or a serous cavity, an iritis, or other form of internal ophthalmia, may, it is true, get well by simple depletion, &c.; but will any experienced practitioner of the present day risk such a case without having recourse to mercury? For the reasons applicable in these instances; from the peculiar effect which mercury exercises, not only in most inflammations, but especially over those of fibrous membranes; and in order to

arrest the exudation of lymph, and to cause the absorption of those effusions which, by thickening the membranes, and causing those pathological effects to which I have already so frequently alluded, and which prove so constantly the cause of subsequent deafness,—as well as the urgent necessity for arresting the progress of inflammation in a part that may prove destructive to life,—it is, that I so strongly advocate the employment of this remedy. I find that, in most instances, where it is employed early, it produces, as soon as it affects the system, as well-marked an improvement in all the symptoms as it does in any of the other inflammations which I have enumerated. It should, therefore, be given in small, frequently-repeated doses; and the formula I find most efficacious is calomel and blue pill, guarded with opium, and, if the stomach will bear it, a very small quantity of James's Powder. Not only should the gums be touched, but the patient should be kept under its gentle influence for some days, in order to insure an ultimate beneficial result.

In the subsequent management of the disease, the iodide and bromide of potassium, or very minute doses of the bichloride of mercury, in some of the preparations of bark, will certainly hasten the cure, as well as promote absorption of the deposits and adhesions already alluded to. The treatment of the tinnitus which remains shall be considered under the head of the chronic form of the disease.

Under no circumstances should we pour any stimulating or sedative liquors into the ear(*a*). The state of the part

(*a*) From the frequency of this most unjustifiable practice in this country, I feel I cannot too strongly deprecate it. If there is one substance more irritating than another in the Pharmacopœia, it is poured, *secundum artem*, into the ear, to relieve pain, or cure deafness, to lessen or to increase the secretion of wax! This practice is often the cause of myringitis. Why are not these essential oils, stimulating liniments, this turpentine, creosote, tincture of cantharides, oil of origanum, &c., poured into the eye or injected into the urethra in cases of inflammation of these parts?

should be examined with a speculum daily, or oftener if necessary; and then, should we discover an ulcer, it may be touched with a solution of nitrate of silver applied upon a fine camel's-hair pencil. If otorrhœa has occurred either from mucous discharge from the external surface of the tympanal membrane and the auditory canal, or owing to pus or mucus escaping from the middle ear through an aperture in the membrana tympani, or from an abscess occurring in the walls of the external auditory canal, we should remove the discharge by very gently syringing the part with simple warm water, or the most bland, unirritating fluids; but during the high inflammatory process no astringent injections whatever should be employed.

If polypoid growths of any magnitude sprout suddenly from the auditory canal, they should be removed with the snare; and this, if properly done, does not give rise to any fresh attack of inflammation.

Should the mastoid process, or the parts covering it, become engaged, and that the methods already recommended fail to give relief, or that even an indistinct sense of fluctuation can be discovered, we should not long hesitate to make a free incision in the periosteum there, at least an inch in length. In performing this operation the head should be firmly secured, and supported against some unyielding substance, as the back of a high chair or the breast of an assistant. A stout scalpel is the best instrument to employ; it should be grasped so that the fore-finger and thumb may come down upon the blade, so as to leave about an inch of it uncovered. It should be inserted steadily till the point reaches the bone, which it should be made to traverse, for the full length of the incision. By this means we secure complete division of the periosteum. With regard to the line of the incision, circumstances may require its being made in other directions, but I find that it is most generally required parallel with, and about an inch from the attachment of the auricle. The knife should be drawn from below

upwards; and from the swollen state of the parts, the depth which we are sometimes obliged to introduce the instrument is often nearly an inch. The hæmorrhage, unless we wish to extract blood, may be arrested by placing a dossil of lint within the incision. The cut surfaces generally present the brawn-like appearance seen in phlegmonoid erysipelas. Although pus may not have been reached by the incision, still immediate relief is almost invariably experienced. The subsequent management of this particular part of such a case must depend upon the circumstance of exfoliation, &c. The treatment of the chronic form of the disease shall be considered in the subsequent part of this communication.

The following cases exhibit many of the phenomena detailed in the foregoing description. They are given at somewhat greater length than would be necessary, were the diseases of the ear as much attended to by the general physician or surgeon as they ought, or if the treatment of these diseases formed a part of the present system of medical education in these countries.

Case I.—*Acute Myringitis and Tympanitis*(*a*) *in both Ears, with severe Head Symptoms; Recovery under the use of Mercury.*

Master J—, aged 12 years, with light hair and florid complexion (whose elder brother had been under my care a short time previously for chronic inflammation of the left, and acute inflammation of the right ear), had always enjoyed good health, and never had any aural affection, till Sunday, the 1st of August last, when he was attacked with slight pain in the right ear. Upon the Friday previous he had bathed in the open sea five times, and had dived frequently each time. Upon the day following he bathed three times, and also dived. He awoke on Sunday morning early with some pain in the right ear, but

(*a*) By the term myringitis we understand inflammation of the membrana tympani; and by tympanitis, inflammation of the cavity of the tympanum.

made no complaint of it, as he says it was but slight; it was accompanied, however, by a feeling of pressure, as if something was bursting out through the ear. He bathed, however, again, twice upon that day. Towards evening pain came on in the left ear, and increased greatly in the right. He retired to rest early, and having been reminded of the provocation for his pains, he made no further complaint. About twelve o'clock that night, however, his mother was awoke by his cries and moans, the result of the extreme agony which he was then suffering. A neighbouring practitioner was applied to, and some camphorated oil and laudanum dropped into the ear. This treatment, however, afforded him no relief, and he remained awake all night, moaning much, and complaining of the violent pain in his head and ears, which he likened to a sharp instrument penetrating from without.

I saw him on Monday morning, the 2nd, about ten o'clock; the face was flushed, and the countenance anxious and expressive of extreme pain. The pupils were rather more contracted than natural, and the eyes slightly sensitive to light; he had some heat of skin, but the pulse was not above 76; the bowels were constipated, and the urine natural. Upon examination the auricle and external meatus were found natural; considerable pain was experienced upon pressing the cartilage behind the articulation of the jaw, but pressure over the mastoid region was borne with impunity. Upon introducing a tubular speculum into the external meatus, the auditory canal was found of a light rose-colour, quite dry, and devoid of cerumen; the membrana tympani was distinctly seen of a deep pink colour, generally diffused over it, but increasing in intensity in a crescentic form round its lower insertion, and also in the line of the attachment of the malleus. The appearances were nearly the same on both sides. As this boy was brought to my house I had a better opportunity of accurately recording the state of the parts than one is usually able to effect in the sick chamber. The appearance of the throat was

normal; the finger pressed against the mouth of the Eustachian tube caused but slight increase of the pain. Moving the articulation of the jaw, the act of deglutition, mastication, or coughing, were scarcely attended with any aggravation of the symptoms. Pressing air through the Eustachian tube, by holding the mouth and nose, and making a forced expiration, was also unattended by any unpleasant symptoms, but it passed up with great difficulty. Hearing then unimpaired.

He was ordered to be put to bed; to take a purgative bolus, and to have two leeches immediately applied to the posterior margin of the external meatus, as far in as possible, on both sides. The leeches afforded some relief, but towards evening the pain returned with great violence. He became quite delirious about six o'clock; did not know his friends; and could with difficulty be retained in bed. I saw him about eight o'clock; he was then in high fever, but more sensible; there was great heat of skin; pulse 80, and fuller than in the morning; tongue clean; bowels had been fully opened; made water freely; urine limpid; no thirst; knows all his friends now, but does not pay much attention to what is going forward about him; is quite rational when spoken to; complains of intolerance of light; face has become more flushed and anxious; complains now of the great weight of his head, which he rolls about from side to side; has had no sleep. On examination I found that the redness of the passage and membrane of the drum had greatly increased since morning, but there was no tumefaction of either. Pressure or percussion of the mastoid process, and the infraaural region, was borne without wincing. Two more leeches were ordered to be applied over the articulation of the jaw, in front of the tragus upon each side, and small doses of calomel, opium, and James's Powder to be administered every third hour. The ear to be steamed over hot water, and a linseed poultice to be applied subsequently: scarcely any diminution of hearing.

Tuesday, 3rd. Has passed a sleepless night, raving occa-

sionally. All his previous symptoms continue unabated, in addition to which, he now, for the first time, complains of noise in his ears, which he likens to that of the sea or tide. This noise is, he says, generally diffused through the head as well as in the ears. The pain is somewhat increased. He says he feels as if a lance was running into his head; bowels free; gums and breath unaffected by the mercury: blisters ordered to be applied behind the ears upon both sides. During the night of Tuesday he again became violent, and did not know his friends. The urine became remarkably dark-coloured. He had no sleep. The mercury was steadily persevered in, and towards morning he complained of some soreness of his mouth and gums.

Wednesday, 4th. Countenance less anxious; pulse not so full; pain in ears and head very much less; mouth slightly sore; complains of pain in swallowing, which he refers to the middle ear; has now become very deaf, and complains of increase of noise; this noise he describes as now of two kinds,—a continuous, uninterrupted bellows sound, and an occasional ticking, like that of a loud watch, which commences and stops suddenly; passed another sleepless night; raved occasionally; pain has very much lessened; membrane and passage unaltered: interval between doses of mercury increased.

Thursday, 5th. He is much better in every respect; he has had no delirium since last report; lies quiet on his side; the light is still offensive to him; skin cooler; pulse 80; bowels free; mouth very sore; deafness still continues; noise in head not so violent; urine high coloured: mercury stopped. The membrana tympani and auditory canal are much less red; the occipital region was ordered to be shaved, and two small blisters to be applied behind the insertion of the mastoid muscles. On Thursday night he was remarkably tranquil, and had some sleep. His chief complaint now is of the soreness of his mouth from the effects of the mercury.

Friday, 6th. At eleven o'clock this morning he was sud-

denly attacked with acute pain in both ears, of a sharp lancinating character. Leeches were again applied round the meatus on both sides, and warm stupes and fomentations again had recourse to. These means afforded him relief in a short time.

Saturday, 7th. Has slept well during the previous night; has had no return of the acute pain, but a dull aching still continues in both ears; he is very deaf to-day, but he is not so sensitive to light; the bellows noise still continues in his ears, and that which was formerly described as the ticking of a watch, he now likens to the clapping of two pieces of iron together. He only hears an ordinary ticking watch when it is pressed against the auricle of the left side, not at all on the right; he does not hear it when applied to the forehead, or held between the teeth, and but very slightly when applied upon the mastoid process. He complains of a return of the weight in his head to-day; sleeps much; bowels free; urine of a dark brown colour, and depositing a pinkish sediment; mouth very sore. Upon the visit at four o'clock in the evening the countenance was found more tranquil than on any previous occasion; the skin cool; pulse 75; functions natural: pressure on the tragus is now borne with impunity. Upon inspection the membrana tympani was found much less red, particularly on the left side; it is also beginning to clear above the malleus; mouth still very sore; ordered a gargle, and to have light broth.

Monday, 9th. Much better in every respect. A slight muco-purulent discharge now appears from the meatus of the right ear. On removing this with a little tepid water from a syringe, and bringing the membrana tympani within the field of the speculum, the redness was found to have greatly disappeared, except on two or three spots, about the size of pin-heads; all the intermediate portions of the membrane had become white, and apparently thick and pulpy. Upon the left side there is a slight moisture from a mucous discharge, which coats over the surface of the membrane of the drum, and the inferior portion of the wall of the canal. Having removed this with a little

cotton on a probe, the vascularity which had previously appeared on those parts was found to have greatly diminished; but the membrane itself had become thickened and opaque; he is quite free from pain; the hearing distance has increased to about two inches on each side; ordered three grains of the hydriodate of potash three times a day, and nutritious diet. On the right side two small glands have now appeared beneath the lobe, and another slightly enlarged over the mastoid process.

Thursday, 12th. Has very much improved in every respect since last report; is now quite free from fever, but is very weak and languid; tongue clean; soreness of mouth quite removed; pulse 60; has some appetite; sat up for a short time yesterday; glands in the neck much lessened, that over the mastoid process still tender; is quite free from pain in the ears, but still complains of a slight, generally-diffused pain in his head; there is no intolerance of light; hearing distance has increased to eighteen inches on each side; has had no discharge from the ear since; the loud ticking noise has quite disappeared; but the buzzing or bellows sound is still slightly perceptible; any surrounding noise is particularly distressing to him; he says he feels as if it struck his ear. Upon examination of the right ear, the passage is found to be quite dry, and of a light pink colour; the membrana tympani generally is somewhat redder than on the occasion of my former visit; and, besides this generally diffused redness, there is a deep-coloured ring of vessels to be seen, forming a crescentic band about a line in breadth, occupying the lower portion of the membrane, the vessels of which can be distinctly seen running in nearly straight lines from the circumference towards the centre, very similar to some of the forms of corneitis. The projection of the hammer-bone is marked by a fasciculus of dark red vessels, running along the course of its attachment. In the left ear the general redness of the passage and the membrane is not so great, and there is no ring of vessels such as exists upon the right side. He states that, on Tuesday, on blowing his nose, he felt as if some-

thing gave way in his right ear, and that immediately his hearing increased, and on repeating the experiment a few times, the same phenomena took place in the left ear. Since then his hearing has gradually improved to the present time; he was ordered to be blistered again behind the ears, to continue the use of the potash, to sit up for a few hours every day, and have nutritious diet. His functions are all natural, and he sleeps tranquilly through the entire night.

Monday, 16th. Has continued to improve; hearing has increased to three feet upon the right, and four feet upon the left side. Upon examination the right membrana tympani is found much less vascular but somewhat more opaque than the left, which is still of a uniform pinkish colour, but has, nevertheless, regained its polish and semi-transparency much more than the other. The buzzing noise is still slightly felt. The blisters were repeated, and the potash, with tincture of iodine continued; slight open air exercise permitted.

Wednesday, 18th. From the general improvement in his health, he was enabled to visit me at my house on this date. He states that he is now quite well, but is still weak; he looks pale and thin; the buzzing, and all other noises, have completely disappeared. The membrana tympani on the right side is found to have lost much of its vascularity, but is uniformly opaque, and is also dull upon its surface; with this ear the hearing distance is now four feet(*a*), whereas with the left, which is still very vascular, but much more transparent, the hearing distance is now full six feet. A generous diet and the potash and iodine ordered to be continued.

Sept. 25. His general health is now quite restored; his hearing as good as ever; the noise has entirely disappeared. During the past month a blush of redness has several times appeared upon the left membrana tympani. Still his hearing

(*a*) The same watch having been used in this and all the other cases in the report, the comparative amount of difference in hearing is correct.

distance with that ear is somewhat greater than on the right side, in which the membrane is not vascular, but slightly opaque. Occasionally leeching, blistering several times, and the use of the iodine and potash internally, have now completely restored him.

The constitutional symptoms in this case were more than usually severe, and such as might lead the practitioner to suppose the brain or its membranes engaged. We also learn from this case that inflammation of the tympanum and its membrane may produce such a degree of deafness as that the watch cannot be heard, even when *applied* to the ear.

In all probability the inflammation commenced and was originally confined to the tympanal membrane, and afterwards extended to the middle, and, possibly, the internal ear.

From the latter stage of this boy's case we also learn a fact worthy of observation, namely, that it is not the amount of vascularity, but the degree of thickening and opacity in the membrana tympani, which produces the deafness.

Case II.—*Acute Myringitis and Tympanitis of one Side; Immediate Recovery under the Use of Mercury.*

Catherine Lawlor, aged 21, applied at the hospital at ten o'clock on the morning of the 18th of April, for an attack of intense pain in her right ear. She states that she has not been "regular" for the last six weeks; that she was attacked four days ago with catarrh, attended with considerable stuffing in her nose, and the other usual symptoms of that affection; that she had walked along the sea-shore the day before, with a cold wind blowing upon her right side. She went to bed tolerably well last night, but awoke at three o'clock this morning with a violent beating pain in her ear, accompanied by a loud noise, which she likens to the "puffing of a steam-engine;" the pain resembles that of a sharp instrument penetrating through her ear into her head, which she describes as most excruciating. She had also some pain and soreness over that

side of the head; she felt some difficulty of deglutition, owing to the pain it caused her. Coughing, sneezing, or any motion of the temporo-maxillary articulation, greatly aggravated her sufferings, and gave her a feeling of bursting in the middle ear.

She rose at seven o'clock, felt great sickness of stomach, and had a well-marked rigor whilst dressing. She immediately applied to a neighbouring practitioner, who put some drops with a piece of cotton into her ear, which only aggravated her symptoms. These drops appeared to be oil and laudanum. 11 o'clock, A. M. Her pain still continues, and the noise has increased; there is slight redness and great heat of the auricle. The pain is increased on making pressure over the tragus in front of the meatus; on pressing or percussing the mastoid process slight pain is also complained of. The pain in her ear, however, is not increased by these means, nor is it referred to the tympanum. She has no pain beneath the meatus, nor behind the angle of the jaw. The hearing distance, with an ordinary ticking watch, is scarcely three inches in the right ear. On closing the meatus of the left side the noise is greatly increased. On examination with a speculum the auditory canal is found highly vascular, dry, devoid of cerumen, and exceedingly tender to the touch. The membrana tympani has lost its polish, and is of a bright, florid, generally-diffused red colour, spotted with small patches of a deeper hue, like minute ecchymoses. The projection of the malleus can be recognised, of a darker colour than the surrounding parts, with a whitish line in the centre. Below the malleus, and towards the posterior part of the membrane, a well-defined vesicle, about the size of a grain of mustard seed, and filled with a brownish fluid, can be seen. Upon her holding the mouth and nose, and pressing the air into the Eustachian tube, she experiences considerable difficulty in making it pass up upon that side, while it passes with facility into the tympanum of the left. The ear, or a stethoscope held to the right side during this operation, readily perceives

as soon as the air reaches the tympanum, a squeeling and gurgling sound, as if the air passed not only through a narrow passage, but through a fluid like mucus. This pressure of air into the tympanum greatly aggravates her symptoms.

Upon looking into the mouth, the fauces, uvula, and back of the pharynx are found nearly of their natural colour. Upon inserting the forefinger of the right hand into the mouth, and pressing its point upwards, backwards, and outwards, towards the mouth of the Eustachian tube, considerable increase of pain is experienced in the middle ear. The tongue is coated and flabby; the pulse regular; but there is heat of skin, and considerable anxiety of countenance. The left ear is natural in function and appearance. This patient suffered from rheumatism of the upper extremities some time ago.

Four leeches were applied around the meatus, as far in as possible, and four in the depression in front of the tragus. She was ordered to foment and steam the ear over hot water, placed in the bottom of a long, narrow mug, frequently during the day; and a purge was administered.

April 19th. States that she received immediate relief from the leeching. The countenance is less anxious, and she slept well all night; the noise of a steam-engine is altered to a gurgling sound; the pain and all other symptoms are relieved; the membrana tympani, however, remains nearly the same in colour, but the vesicle has become flaccid. She was put on the use of calomel and opium in small doses frequently repeated; a blister was applied over the mastoid process; the fomentation and warm vapour was ordered to be continued, and a linseed-meal poultice to be applied to the external ear at bed time.

April 20th. Continues to improve. Noise changed to that of the ringing of bells; the pain, on pressing the mouth of the Eustachian tube, is much less; the membrana tympani is less vascular; the general symptoms are all improved; the mercury to be continued.

April 21st. All the symptoms relieved; the mouth is slightly sore; no pain on pressing anywhere around the ear or meatus; all heat and vascularity of auricle is removed; the membrana tympani has lost its vascularity, but is slightly more opaque, and whiter than natural; the vesicle has quite disappeared; three or four large vessels can still be seen coursing along the handle of the malleus. Upon forcing air through the Eustachian tube into the tympanum, a slight gurgling noise can be perceived in the middle ear, and of the peculiar sensation which it imparts the patient is quite conscious. During this operation and while the membrane is within the field of the speculum, a slight blush of redness, of a pinkish hue, is observed to be produced in the membrane. The hearing distance is increased to four inches. A copious red deposit was observed in the urine. She has been slightly purged by the mercury; ordered to lessen its dose to one pill night and morning.

April 23rd. Continues to improve in hearing; noise as before; she has had no return of pain in the ear; the pain and soreness in the head gone; no flying pains or other rheumatic affection; the mouth is very sore: ordered to stop the pills, and take the sixteenth of a grain of oxymuriate of mercury with decoction and tincture of bark three times a day; generous diet.

April 25. Continues to improve rapidly; membrana tympani is more transparent than upon last examination. Hearing distance is increased to twelve inches; slight pain is still felt on pressure over the lower portion of the mastoid process, and opposite the point of the styloid process, in which latter place it is still increased on coughing: ordered to continue the oxymuriate and bark, and apply another blister.

May 1st. Ceased attendance at the institution; all her symptoms having now disappeared, with the exception of a slight buzzing occasionally. The hearing, she says, is perfectly restored.

September 1st. I had an opportunity of examining this

young woman again this day; she states that she is perfectly well in every respect, and that her hearing is quite restored; but she says that she occasionally suffers from a slight "ticking noise" in the ear which was affected. Upon examination I found the membrane of the drum upon this side presenting a slightly mottled appearance, particularly towards its lower edge, but without an opacity of any account. Her hearing, she says, is equally perfect on both sides; but upon testing it by the watch, the hearing distance is found to be two feet less upon the right side than upon the other.

Case III.—*Severe Rheumatic Inflammation of the Membrane and Cavity of the Tympanum, with Periostitis, Polypus, &c.*

Mr. F., aged 49, with light hair and fair complexion, had suffered several years ago from a severe attack of rheumatism, in which his heart was affected, caught while exposed to a cold wind upon the top of a coach during a long journey through England; since that period he has been very liable to catch cold, in the head particularly, when the feet were exposed to damp or a low temperature. These attacks of catarrh were characterized by violent fits of sneezing and running at the nose, &c.; latterly his sense of smelling became greatly impaired, and he perceived a stuffing in the right nostril which rendered him very uncomfortable. During the summer of 1846 he was attacked with cough, expectoration, and other symptoms of bronchitis, in addition to the catarrhal affection. Having recovered from this, he remained in good health till January, 1847, on the 28th of which month, during a period of very wet and severe weather, his present attack commenced. His own words are: "About this period I wore a muffler about my neck; one sharp morning I walked into my office, laid it aside on my arrival, and, being called off suddenly to the Four Courts, I forgot to put it on again. On my way there I felt a blast of sharp, cold air strike my throat on the right side, under the ear, but I

did not pay much attention to it, and remained in Court most of the day, with my hat off occasionally. About 2 o'clock I felt a slight pain in the right ear, and got a bit of cotton-wool put into it; about 6 o'clock I returned home from my office. I called at my apothecary's who dropped some warm oil and laudanum into my ear, which for a time lessened the pain, but did not completely remove it; but I was enabled to resume my business as usual next day."

Mr. Collins, to whom Mr. F. first applied, writes to me as follows: "When Mr. F. first called upon me he complained of pain in his right ear, and also of slight shooting pains about that side of the head; he looked a little dull and heavy, but there was no fever, quickness of pulse, headach, deafness, or other symptoms of importance present. I considered his attack to be of a rheumatic or neuralgic character, particularly as he had suffered a few years before from severe rheumatic fever; and as the pain in the ear was what he most complained of, I dropped some tincture of opium and olive oil into it, and applied a bit of wool to prevent its coming out; I also ordered him an aperient. Upon the next evening Mr. F. again applied to me on his return from Court, and stated that he had derived relief from the drops until he was again exposed to cold and draughts that day: the drops were again applied and with relief. The next day Mr. F. resumed his usual avocations, but the pain continued to increase, and four leeches were applied behind the ear, and a poppy fomentation and a poultice applied with considerable relief, though some slight pain still remained in the ear and the side of the head. His sense of smelling now returned and continued perfect for a few days, when it was again lost. Mr. F. confined himself to the house for the next two or three days, but would not consent to do so longer, as he felt much relieved of the pain, and business of great importance required his attention at his office. In a few days from this date his former symptoms returned, to relieve

which he was strongly recommended by a non-medical friend to drop into the ear a liniment of oil of turpentine and oil of cinnamon, which I prepared for him, but, having experienced no benefit from this, he applied to you."

I first saw this gentleman upon the 13th February; he complained of acute pain in his right ear, which, as appears from the foregoing account, had continued off and on during the previous fortnight. The pain he described as "shooting from the ear to the temple and top of the head, accompanied with a boiling and pumping noise, like that of a steam-engine;" the pain also appeared, according to his own description, to reach to the throat, without making the throat sore; it was increased by sneezing, but relieved by pressing the hand upon the ear and side of the head. Upon inspection, the auricle was found hot and somewhat swollen; the lining of the meatus and auditory canal was red, tumid, and completely devoid of cerumen; the introduction of the speculum, and the examination, caused a good deal of pain from the tenderness of the parts; the membrana tympani was of a dark, brown, red colour, had lost its polish, and appeared to be swollen and pressed outwards: the projection of the malleus could not be discerned in front of the ear; pressure in front of the ear gave a good deal of pain, but there was no tenderness over the mastoid process. Rest, abstinence, confinement to the house, constant fomentations, leeches round the meatus; with small doses of blue pill, James's Powder, and hyosciamus, at night, and an aperient in the morning, was the treatment resorted to during the next few days.

Upon the 19th, his symptoms, with the exception of the pain in the ear, continued much the same; he had also flying pains of a rheumatic character in the side of the head, the wrists, feet, and generally throughout the body. The pumping and boiling noise remained unabated: the deafness now became complete upon that side. The appearance of the ear

continuing unchanged, except that the meatus was more swollen, it was deemed advisable to place him under the influence of mercury,—an opinion in which Dr. Stokes, who saw him with me, at that time concurred. He was accordingly, but with some difficulty, mercurialized by means of small and frequently repeated doses of blue pill, calomel, and opium. When his mouth became sore, the pain in the ear and the noise lessened somewhat, and the general rheumatic affection disappeared; but the meatus and auditory canal now became so much decreased in caliber, owing to the thickening of the lining of these parts, that it was not possible to gain more than a glimpse of the red and swollen membrana tympani. The leeching and blistering were continued, and the surfaces denuded by the latter were dressed with extract of belladonna and mercurial ointment.

March 10th.—The cuticle became detached, and a slight muco-purulent discharge took place from the external meatus; the ear was then syringed with plain tepid water; he was allowed a more generous diet, and placed upon the use of the hydriodate of potash, with infusion of bark and tincture of orange peel. His general health was now improved; he slept better, and was able to go abroad and take exercise; the discharge, however, continued to increase, and emitted a very offensive odour; and, at the same time, he began to complain of a deep-seated soreness all over the side of the head, behind the ear, but particularly over the mastoid process and immediately below it. Towards the end of March, upon examining the ear carefully under a good light, a small polypoid excrescence of a light red colour, growing from the posterior wall of the canal, and completely filling up that cavity, was detected; this I removed with the wire snare, and the discharge then lessened; the soreness of the side of the head, the pumping, and the deafness, however, remained the same. Pressure over the mastoid process, and the post-

aural region of the head, very much increased the soreness, and it was now evident that the periosteum covering these parts was inflamed. During the latter part of the month of April, and all the month of May, the symptoms of periostitis remained much the same, and the scalp itself became inflamed, having a dusky, red hue, pitting on pressure, and feeling excessively sore to the touch. The treatment consisted in the frequent abstraction of blood from the affected part by means of a few leeches, and a small cupping-glass applied over the leech-bites; poulticing, inunction with different ointments, both of a sedative and absorbent nature, slight vesicants, &c., and change of air. Bark, potash, and iodine, were also recommended to improve the general state of the constitution. He had no headach, rigors, or perspirations, and his sleep and appetite were tolerably good; still, however, the pain continued, and the dusky redness and tumefaction of the scalp remained, although there was no evidence of suppuration. It was determined, in consultation with Mr. Cusack, to make an incision down to the bone, and thus free the periosteum, and give exit to any matter which might be contained beneath it. Accordingly, upon the 29th of May I made a perpendicular incision, about two inches long, nearly parallel with the posterior margin of the auricle, by inserting a sharp-pointed scalpel down to the bone at the point of insertion of the mastoid muscle, and carrying it upwards and a little backwards. The bone did not feel rough or gritty under the knife. A pledget of lint was inserted into it; and when the hæmorrhage had ceased, a linseed-meal poultice was applied over it.

The wound suppurated kindly, and all the surrounding soreness of the scalp and pain on pressure soon disappeared. As the discharge from the wound increased that from the meatus lessened, and in about ten days the wound itself healed without any exfoliation of bone. The pumping noise now ceased altogether, the discharge from the ear also lessened very

much, and all uneasiness in the parts ceased. During the month of July, and till the 12th of August, I only saw Mr. F. occasionally. Upon examining the ear carefully at this latter date, I perceived that the meatus had regained its natural size, and I discovered another second small polypus in the situation of the first; this I also removed, and Mr. F. came to me in a day or two to inform me that the discharge had now ceased altogether, and that the hearing had returned the night after I had extracted the polypus. He could now perceive the ticking of a watch at the distance of an inch from his ear, although he was quite unconscious of it when pressed against the auricle the day I last saw him. I could now distinguish the membrana tympani perfectly; it was of a dull white colour, evidently much thickened, but not perforated in any part.

September 3rd. He has continued to improve in every respect; his health and spirits are quite restored; all discharge from the ear has ceased; the tinnitus aurium now consists in a slight "booing" which appears occasionally: the hearing is slowly returning. The snuffling and loss of smell I now found to be caused in a great measure by a small gelatinous polypus which filled up the cavity of the right anterior nares, which upon being removed greatly assisted to restore both the nasal respiration and the sense of smell.

This case is instructive, as shewing the rheumatic character of some of the inflammations of the ear, and as exhibiting the occasional failure of the mercurial treatment to cut short the disease, particularly if it has advanced to any height, as this had. The discharge came from the external ear and the polypus. This morbid polypoid growth, thus appearing during the progress of an inflammation, should always lead the practitioner to suspect mischief going on in the neighbourhood, and should cause him to examine with great care the condition of the mastoid process and its coverings, although neither the existence of a polypus, nor the fetor or dark colour of the dis-

charge, are of themselves a sufficient proof of caries or denuded bone. The appearance of periostitis, even at this late period, is not an unusual consequence of violent otitis; the inflammation may spread from the periosteum lining the bony portion of the meatus; or the mastoid cells may, and often are, the seat of inflammation, and this inflammation may extend from the layer of bone which covers them to the periosteum. If not relieved by such local and general means as were made use of in the early part of the foregoing case, the surgeon should not hesitate to cut down upon the covering of the bone, and divide it fairly for an inch or more of its length. Almost immediate ease follows this operation, even though we fail to discover the existence of pus; and, moreover, delay after a certain period may prove fatal. A thin shell of bone is occasionally thrown off in such cases, but not always. Generally speaking, the otorrhœa lessens when the discharge from the wound is fully established, although there may not be any communication whatever between the parts from which these discharges come. I had occasion to resort to this operation five times during the past year: in two cases it was followed by the exfoliation of a thin shell of bone; in all, hearing was restored either partially or completely. Performed in the situation and in the manner described in the foregoing case, the hæmorrhage which follows is generally very trifling. It is necessary to keep a tent in the wound till suppuration is established. When this pain over the mastoid process appears early in the disease, and is accompanied by an erysipelatous redness and œdema of the scalp, we should not hesitate in having recourse to incision immediately.

We have in this case another remarkable example of a mechanical impediment, such as the polypus, so completely obstructing sound that a watch held to the ear was not perceived, although hearing returned within a few hours when that mechanical obstruction was removed. There can be little doubt of the middle ear having been engaged in this inflam-

mation, yet we have no evidence of perforation of the membrane of the drum having taken place. The only treatment at present employed with Mr. F. is that of occasionally washing over the auditory canal and membrana tympani with the ten-grain solution of nitrate of silver(*a*).

September 10th.—His hearing had increased to the distance of ten inches on the affected side. It continues to improve.

(*a*) It was with considerable surprise I read an article by Dr. Bonnafont in the *Gazette des Hôpitaux*, for November last, recommending a *powder of nitrate of silver to be blown into the ear*, for the cure of ulcerations attending otorrhœa. With still greater wonder and regret have I seen such a practice quoted and recommended in British journals. A more empirical practice, except that of a farrier blowing powdered white sugar and quicklime into the eye of a horse, to cure it of the "Haws," I never knew advocated. With as much reason should powdered caustics be blown up the vagina, or the rectum, or into the throat or nose, or into the eye, to cure a spot of ulceration on these parts, as into the ear; and with as much ease, certainty, and security can an ulcer in the auditory passage, or on the membrana tympani, be touched with a caustic, either in substance or solution, without injuring the adjoining surfaces, as into any of these cavities. See the London and Edinburgh Monthly Journal; and Ranking's Half Yearly Abstract for July, 1847.

So long as practices, such as that recommended by Dr. Bonnafont, are quoted by our English journals, so long shall the treatment of diseases of the ear be considered an "opprobrium" to medicine. Mr. Ancell's Report on the Progress of Aural Surgery, which appeared in Dr. Ranking's last Abstract, shall be again referred to in the continuation of this communication.

In the present state of aural surgery the record of well-observed cases would greatly assist the progress of this department of medical science.

(*To be continued.*)

PART II.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

A Treatise on the Structure, Diseases, and Injuries of the Blood Vessels, with statistical Deductions: being the Essay to which the Jacksonian Prize, for the year 1844, was awarded by the Royal College of Surgeons of England. With numerous Additions. By Edward Crisp, M. R. C. S. London, Churchill. 8vo. pp. 354.

At all times the importance of diseases and injuries of the blood-vessels has been acknowledged: and, notwithstanding the admirable works of Scarpa, Hodgson, and others, the subject has not lost any of its interest; the investigation of it still continues; facts of the greatest importance are daily being made known, and the modern improvements in the treatment of aneurisms continue to attract the deepest attention of the surgeons of the present day.

The work commences with a chapter on the structure of arteries and veins. The author recognises the existence of four coats in an artery: first, the internal, or serous; secondly, the subserous, or tunica cellulosa of Haller, or sclerous of Malgaigne; thirdly, the fibrous; and, fourthly, the cellular. He states that he has "frequently seen the lining membrane of a bright yellow colour in jaundiced subjects," but in animals which he fed on madder "its colour remained unaltered."—p. 2. The second, or subserous tunic, he states, is of a whitish colour; that it varies in thickness according to the age of the individual; that it is much less distinct in the young than in the middle-aged, and more dense in the apoplectic and those affected with hypertrophy of the left ventricle; that its fibres pass in an oblique or longitudinal direction, and may be distinctly recognized on the arch and ascending portion of the aorta; and he believes that the adventitious deposits are seated

principally, if not invariably, in this tunic. With regard to the third, or fibrous coat, the author observes:

"I have never detected any deposits in it; and although in many dried specimens, where the arteries are converted into bony cylinders, the ossified matter appears to be seated in this tunic, I believe a careful inspection will shew that the deposits are really in the subserous membrane."—p. 3.

In speaking of the "morbid conditions of arteries," he inquires:

"How are the different forms of *redness* to be distinguished? It appears to me that the matter may be materially simplified by dividing these discolourations into the *inflammatory*, the *congestive*, and what has been called redness from *imbibition*. The first is characterized by appearances hereafter to be described, and, I believe, when these are present, we may rightly infer the existence of inflammation. The congestive discolouration is, in many instances, difficult to distinguish from the inflammatory; but the state of the blood, as well as the turgid condition of other parts, especially the membraneous tissues, will greatly assist us in coming to a right conclusion. Thus in cases where the blood is found fluid after death, or where it is deficient in fibrine, and its colouring matter, perhaps, altered, these congestions are not unfrequent."—p. 8.

The author, however, admits that "the boundary between inflammation and congestion remains undefined, and that, as our knowledge of the essential characteristics of the former are doubtful, we can scarcely hope that the conflicting opinions which are at present entertained can be reconciled."—p. 9. With regard to the redness from imbibition, he observes:

"I believe the best distinguishing mark between this and the foregoing discolourations is the absence of the *soft, pulpy state of the inner coats*, as well as the facility with which redness is removed by immersion in water."—p. 10.

Further on, the author devotes part of his work to the subject of "Arteritis," and divides this disease into the acute and chronic forms, "the former being of less frequent occurrence than the latter." Speaking of inflammation of the aorta, he remarks:

"The signs attending inflammation of the aorta are very obscure, and the diagnosis, consequently, extremely difficult. When the commencement of the thoracic aorta is affected, the symptoms usually described are, increased and inordinate pulsation of the heart and aorta, great anxiety of countenance, a feeling of suffocation,

dyspnœa, orthopnœa, and pains of a burning or tearing character, often accompanied by a sense of impending dissolution."—p. 24.

These, however, are by no means distinctive characters of the disease, and we are quite of the author's opinion, "that the disease is at present involved in so much obscurity, that in the majority of cases there are no indications of its existence." M. Bizot mentions three cases which he witnessed:

"In all there was an œdematous state of the trunk, arms, and face, attended with febrile excitement, but with no irregularity 'of pulse;' the thoracic and abdominal aorta (especially the former) were red, and covered with a soft, thin, yellowish layer of albuminous exudation, easily detached, and giving a rough aspect of the inner membrane."

Mr. Crisp relates the particulars of the *post mortem* examination of a patient under his own care, who laboured under pneumonia and bronchitis, together with a granular state of the kidneys:

"A few minute specks of atheromatous deposits were found in the thoracic and abdominal aorta. The inner coat was much reddened, swollen, and easily detached; the redness not removed by washing; the cellular covering also was much injected," &c.—p. 25.

The author has taken considerable pains with that portion of the work which he has devoted to the subject of arteritis in the extremities. The connexion between arteritis and dry gangrene was originally pointed out by Dupuytren, and the laborious researches of Mr. Crisp have added much valuable information to what has been already known upon this subject. He has related the particulars of eleven cases of arteritis, followed by dry gangrene. Some of these were cases of spontaneous dry gangrene; two were the result of injury, and one from the application of a ligature to the femoral artery for popliteal aneurism. In almost all of them the principal arteries were filled with a firm coagulum, adherent to the lining membrane, which latter, in many instances, presented an intensely red appearance. Under the head of "Arterial Deposits," the author dwells upon the several forms, namely, the *atheromatous*, *semi-cartilaginous*, *cartilaginous*, *calcareous*, and *bony*, and remarks:

"They generally take place in patches, varying in size, form, consistence, and elevation, and are always, I believe, situated in the subserous coat, the inner membrane, in many specimens, being easily removed. I have never found these deposits in the fibrous layer, although in dry specimens they appear to occupy this part."—p. 67.

In speaking of the diseases of the cerebral arteries, he remarks:

"The cerebral arteries are frequently thickened, and sometimes entirely obstructed, by atheromatous and cartilaginous deposits. These are more commonly found in persons of advanced age; but I have met with them in individuals under forty. The deposit is generally of a yellowish colour, of a cartilaginous consistence, and is situated under the serous coat. In three instances, in which I have placed this adventitious substance under the microscope, no fatty matter or oil globules were present. This deposit frequently diminishes the caliber of the artery so much as to interfere materially with the circulation of the blood. *I have never seen the cerebral arteries, like those of the extremities, converted into bone;* and I apprehend that this alteration is of rare occurrence, although the term "ossified" is constantly used. In one example the patient was ninety-five years of age. The arteries were described in the museum catalogue as bony; but on cutting into the deposit no ossific matter was discovered."—p. 74.

Mr. Crisp evidently considers this alteration, usually designated an "*ossification*" of the arteries of the cerebrum, as very problematical. Mr. Robert W. Smith, the conservator of the Richmond Hospital Museum, has recently favoured us with an inspection of two preparations of diseased deposits in the cerebral arteries: in one, the atheromatous deposit prevails; but in several spots there are distinct patches of "ossific" matter; and in the second preparation almost all the arteries of the brain have undergone the "ossific" degeneration. We recollect having seen, about three years ago, a precisely similar instance in the brain of a patient who died at the age of about 30.

The author devotes but a small part of his essay to the "Diseases of the Aortic Valves." He has observed the following: 1, acute inflammation; 2, thickening and inflammatory adhesion; 3, cartilaginous, atheromatous, calcareous, and bony deposits, commencing in the fibrous tissue, and generally more abundant at the bases and free margins of the valves, and varying much in size; 4, vegetations; 5, retroversion and inversion of the borders; 6, enlargements and universal dilatations; 7, ruptures; 8, aneurismal or partial dilatation. In speaking of the symptoms and diagnosis of disease of the aortic valves, he says:

"The function of the valves being frequently so much altered as to allow of *regurgitation of this fluid.* In other examples the aortic orifice is so obstructed as scarcely to admit of the passage of one-sixth of the usual quantity of blood."—p. 80.

We are rather surprised to find that the author has made no reference to an excellent paper upon this subject, by Dr. Corrigan, in the thirty-seventh volume of the Edinburgh Medical and Surgical Journal. To the disease of the aortic valves admitting of regurgitation of the blood into the left ventricle, Dr. Corrigan has given the name of "*permanent patency.*" He describes four cases of this regurgitation: 1, where the aortic valves have been absorbed in patches, so as to present a reticulated appearance; 2, where one or more of the valves may have been ruptured; 3, where, from disease, the edges of the valves may be turned out towards the sides of the aorta, so that they cannot spread across its mouth; and 4, where the valves, without any proper lesion, may be rendered inadequate to their function by dilatation of the mouth of the aorta. Mr. Crisp has overlooked a very remarkable sign of this affection which Dr. Corrigan particularly dwells on, and thus described:

"When a patient affected by the disease is stripped, the arterial trunks of the head, neck, and superior extremities immediately catch the eye by their singular pulsation: at each diastole, the subclavian, carotid, temporal, brachial, and in some cases even the palmar arteries, are suddenly thrown from their bed, bounding under the skin. From its singular and striking appearance the name of *visible pulsation* is given to this beating of the arteries."(*a*)

We pass on to that portion of Mr. Crisp's work devoted to the subject of aneurisms. He objects to the nomenclature at present employed in this disease, and observes:

"If the term *endogenous* were substituted for that of *spontaneous* when speaking of aneurisms which arise from lesions of the inner coats, and the term *exogenous* or traumatic applied to those which are produced by external division of the arterial walls, I think the nomenclature would be more appropriate."—p. 110.

We confess we are somewhat at a loss to understand what analogy there exists between an "exogenous aneurism" and an "exogenous plant;" the term from usage has become botanical, and when we employ it in reference to a plant, we mean one that increases in its circumference by means of additions made *externally* to the part already formed. The comparison between the injured artery and the growing plant is thus liable to produce confusion: there are "*laminæ*" deposited in both; in the aneurism, the deposit of the layers is from within, thus all aneurisms may be said to be "*endogenous*;" whilst in *exogenous* plants the deposit is from without, the last layer laid down being the

(*a*) Edinburgh Med. and Surg. Jour., vol. xxxvii p. 226.

most external of all, which cannot be the case in aneurismal tumours.

The author has exhibited an immense amount of labour and research in arranging a table of 551 spontaneous aneurisms, selected indiscriminately from the British Medical and Surgical Journals, from the year 1785 to the present time. The following is the summary of the cases:

Situation.	No. of Cases.
Thoracic aorta,	175
Pulmonary,	2
Abdominal aorta and its branches,	59
Common iliac,	2
External iliac,	9
Gluteal,	2
Femoral,	66
Popliteal,	137
Posterior tibial,	2
Innominata,	20
Carotid,	25
Cerebral,	7
Temporal,	1
Ophthalmic,	1
Subclavian,	23
Axillary,	18
Subscapular,	1
Brachial,	1
Total,	551

Age.	No. of Cases.
Under 10 years of age,	1
Between 10 and 20	5
„ 20 and 30	71
„ 30 and 40	198
„ 40 and 50	129
„ 50 and 60	65
„ 60 and 70	25
„ 70 and 80	8
„ 80 and 90	2
„ 90 and 100	1
Age not stated,	46
Total,	551

"I have examined 364 preparations of aneurism in the London museums, and the numbers are as follows:—

Situation.	No. of Cases.
Thoracic aorta,	207
Abdominal aorta,	42
Internal iliac,	1
Common iliac,	2
External iliac,	7
Femoral,	12
Popliteal,	50
Posterior tibial,	2
Innominata,	3
Subclavian,	12
Axillary,	8
Carotid,	9
Mesenteric,	2
Splenic,	2
Cerebral,	1
Vertebral,	1
Radial,	1
Pulmonary,	2
Total,	364

"No useful deduction can be drawn from the above, as to the

comparative frequency of aneurism, as the greater number of external aneurisms are cured by operation."—p. 113.

The author adverts to the several causes of aneurismal tumours, and dwells at length upon the disease as developed in the individual arteries of the human body. In speaking of the *treatment* of aneurisms, the author remarks concerning pressure as a means of cure:

"This mode of treatment is now becoming so frequent in aneurisms of the femoral artery, and the cases in which it has been recently employed have been so successful, that there is great probability that the use of the ligature in the cure of popliteal and femoral aneurisms will hereafter be seldom resorted to."—p. 177.

Again:

"Mr. Syme, of Edinburgh, has been one of the most strenuous of the modern objectors to this mode of treatment; but I think the evidence in favour of the plan is now so abundant and satisfactory, that Mr. Syme will be induced to change his opinion."—p. 184.

We fully concur in these observations, and are equally sanguine in our hopes as to the change in Mr. Syme's views. On the present occasion we do not mean to offer any further remarks on Mr. Crisp's book; but in concluding this brief notice we would say, that we fear we have not been able to do justice to its contents: it abounds in sound practical knowledge, and gives evidence of immense labour, and most patient research; and, were it only for the sake of the interesting cases which are embodied in its pages, the book would be well worth the attentive perusal of the practitioner.

On Pulmonary Consumption and on Bronchial and Laryngeal Disease, with Remarks on the Places of Residence chiefly resorted to by the consumptive Invalid. By Sir Charles Scudamore, M. D., F. R. S., of the Royal College of Physicians of London, Honorary Member of Trinity College, Dublin, &c., &c. 8vo. London, Churchill. 1847. pp. 259.

We chanced a short time since to have occasion to refer to the seventh volume of the London Medical Gazette, published in 1830-31, when our attention was attracted by a critical notice of a work from the pen of Sir Charles Scudamore, on the "Efficacy of the Inhalation of certain Medicines in Pulmonary Consumptions," which work was written with the manifest intention of diverting some of the golden shower, at that time

falling on the notorious quack St. John Long, upon his own person. The reviewer, in taking the author to task with no sparing hand, amongst other points, notices the singular assumption of the title,—*Honorary Member of Trinity College, Dublin.* In a reply to this review, published in the same volume of the Gazette, Sir Charles Scudamore apologises for having used it instead of the title "Honorary Doctor of Medicine of Trinity College," which degree he really does possess. Notwithstanding this apology, we find the honorable (not honorary) knight, with the true spirit of quackery, again assuming, in this, the latest offspring of his pen, the very same designation which he admitted seventeen years ago he had no claim to. The author's reasons for thus decking himself out in false colours we cannot divine; but, as our Journal is printed within the walls of Trinity College, Dublin, we feel bound to expose any attempted imposition on the public in connexion with that institution.

The book now before us is a *réchauffé* of that published in 1830, which we have above referred to, some seasoning being added to give it the appearance of a new book, and to recall the attention of the public—not the profession—to Sir Charles Scudamore. The new seasoning consists of "the results of the author's further inquiries into the physiology and pathology of the several diseases of which he treats, and with them his enlarged experience of the general principles of practice."

Although in the title of the book nothing is said about the mode of treating pulmonary consumption by the inhalation of iodine vapour, no less than one hundred pages are taken up with the minute details of cases thus treated. We must, therefore, look upon this as the theme of the present publication, and for a few moments beg our readers' attention to the author's account of the success which he vaunts to have obtained from this remedy. We let Sir Charles speak for himself:

"Having brought to a conclusion all the evidence which I intend to offer in favour of inhalation, it remains for me to express my sentiments and convictions still more distinctly than I have yet done, regarding the value of the particular inhalation of iodine and conium, as a remedy in tubercular phthisis.

"From the favourable list of cases which I have given, it may, doubtless, be inferred, that I entertain great confidence of being able to cure consumption. I may, perhaps, be accused of shewing too much of one side of the picture, and painting that in too flattering colours.

"I can conscientiously declare, that I have not been guilty of *the least exaggeration* in any part of my narrative of cases. * * * The instances of success, as compared with those of failure in my practice in consumption, have been, I confess with regret, compara-

tively very few; but one explanation of this painful truth is, that I have, for the most part, been consulted so late in the disease as not to have a reasonable chance afforded me of effecting more than a mitigation of the symptoms. Such cases have been of consumption so confirmed as truly to come under the forcible description given by Sir James Clark, at page 88, of the absolute impossibility of cure, and had been given up by others as lost."—p. 210.

The narrated cases from which these conclusions are drawn are thirty-eight in number: of these, twenty are placed under the head of phthisis, of which fourteen are reported as cured; five relieved, though eventually terminating fatally; and seemingly but one died without relief: five are cases of laryngitis, of which four were cured, and one proved fatal, though much relieved; ten cases of bronchitis, all cured; and three cases of ague, all cured. And yet with such favourable, or rather such wonderful results,—for Sir Charles was, "for the most part, consulted in cases which had been given up by others as *lost*,"—he looks upon "his instances of success as comparatively few."

Why, then, do we doubt that advantage is to be derived from the inhalation of iodine vapour in phthisis (the addition of conium we look upon as nought, for our author uses a tincture prepared from the *dried* leaves)? For the following reasons:—In the first place, were we disposed to look on the cases themselves as being trustworthy, we should be compelled to doubt the author's powers of diagnosis. As evidence of a "very decided case of tubercular phthisis," he gives the following physical signs:

"The stethoscope afforded signs of pectoriloquism to a small extent at the humoral extremity of the right clavicle, and the sound was dull all around this part of the chest."—p. 125.

In another case:

"The following indications appeared from the stethoscope and percussion: the voice was brought distinctly under the tube at the apex of the right lung, and there was obscure *gargouillement* at that part."—p. 134.

Again:

"The left lung gave strong *puerperal* resonance; the right lung was pectoriloquous, from the root to the mamma; there was much gurgling, and percussion was dull over the greater part of the right side; it was also much smaller than the left, and hollow at the clavicle."—p. 140.

This report is stated to be taken from the written statement of a Mr. King, who attended the case with the author.

That Sir Charles Scudamore did, in general, hear some extraordinary sounds, and often find it difficult to hear the vesicular respiration, we do not in the least wonder; for he states in a note that "he finds it advantageous, when using immediate auscultation, to interpose between the ear and the chest a sheet of letter-paper. It seems to render the vesicular respiration more distinct; and it is a neat method!"

Secondly, the cases have too much the smack of quackery for us to pin our faith on their truth. Many of them are without date (Cases 1, 11, 12, 13, 15, 19, 21, 22, 23, 24, 26, 27, 28, 30, 31, 32, 33, 34, 35, 36, and 37); where the name of another physician, who had seen the case in consultation, is mentioned, he fortunately happens to be dead (Cases 3, 4, and 6); in fine, the headings of the cases,—a few samples of which we subjoin as curiosities of medical literature,—are worthy of the pen of Professor Holloway:

"Case 3.—Tubercular phthisis pulmonalis, pectoriloquism. A very decided case of consumption. The iodine inhalation successfully employed.

"Case 5.—Phthisis pulmonalis; tubercles in each lung; great probability of an ulcer at the apex of the right lung; hectic fever present; the iodine inhalation highly beneficial; the tubercular irritation removed; and the patient restored to health.

"Case 7.—Well-marked case of tubercular phthisis successfully treated, and the recovery permanent.

"Case 17.—Urgent symptoms of tubercular phthisis twice occurring, with an interval of three years. On the last occasion strong evidence of a small cavity. The disease successfully treated."

And so on we might quote, *usque ad nauseam*.

In conclusion, we have only to add, that many years since, shortly after the publication of Sir Charles Scudamore's first book on the subject, we tried the effects of inhalation as he directed in the treatment of several cases, both of phthisis and of chronic bronchitis; we have also then and since seen it employed in the practice of others; and in our experience, so far from being serviceable to the patients with whom it was used, it almost invariably proved highly injurious, giving rise to repeated attacks of local inflammation, and, by the irritation which it produced, evidently hastening the fatal termination of the disease.

For an ingenious method of employing iodine, chlorine, &c., in the form of vapour, we may, however, refer our readers to Dr. Corrigan's paper on "The Exhibition of Remedies in the Form of Vapour in Pulmonary Diseases," published in the fifteenth volume of our former Series.

A Treatise on the Diseases of the Air Passages, comprising an Inquiry into the History, Pathology, Causes, and Treatment of those Affections of the Throat, called Bronchitis, Chronic Laryngitis, Clergyman's Sore Throat, &c. By HORACE GREEN, A. M., M. D., &c. &c. Royal 8vo. New York and London, Wiley and Putnam. 1846. pp. 276.

IN the year 1840, Dr. Green brought before the New York Medical and Surgical Society his method of treating certain diseases of the larynx by the direct application of caustic solutions. The subject not having excited much attention amongst the members, the author refrained from again referring to it; but after a few years some of the members of the Society,—having themselves employed the plan with success,—obtained the appointment of a committee to inquire "into the practicability of making these topical applications to the surfaces of the larynx." This committee reported in favour of the entire practicability of the operation: but Dr. Green perceiving that much scepticism existed with regard to his statement; and also that many members of the profession were of opinion that it was altogether impossible to introduce matters within the glottis as he proposed, published the Treatise now before us,—both in vindication of his own views, and to call the attention of the profession to that affection of the throat and air passages which he terms "follicular inflammation," and the efficacy of the plan of treatment he proposes for its cure.

"The well-known fact," says he, "of the great irritation produced upon an individual by the accidental introduction of a morsel of food, or a drop of tea, or of any other fluid, below the epiglottis, is always adduced as an unanswerable argument against the practicability of introducing strong medicinal agents into the laryngeal cavity. But this plan of reasoning from analogy, is one not applicable in this case; for it is a singular but most interesting fact,—one that has been fully established by repeated experiments,—that the introduction into the glottis of a sponge saturated with a solution of crystals of the nitrate of silver, of the strength of forty, fifty, or of even sixty grains of the salt to the ounce of water, does not produce, ordinarily, as much disturbance as the accidental imbibition into this cavity of a few drops of tea, or even of pure water."—p. viii.

The author having in the first chapter given a minute and accurate description of the anatomy of the throat, larynx, trachea, and bronchial tubes, proceeds in the second to the consideration of the glandular follicles which are situated in the

mucous membrane lining these passages. The peculiar characters of the different varieties met with, as observed by Lieberkuhn, Böehm, and Henle, are concisely related, their distribution pointed out, and the inferences deduced from their physiological use examined. These points form a natural introduction to the more immediate subject of the Treatise, inasmuch as Dr. Green believes that an abnormal condition of these follicles constitutes " a distinct species of disease, which hitherto has been confounded by writers and medical practitioners with other disorders of these parts, under the names of bronchitis, chronic laryngitis, &c " And it is to this disease, and its treatment, that the author devotes the pages of his book.

That peculiar form of sore throat to which public speakers are especially liable, and which, in this country, we ordinarily term relaxed sore throat, but which in America is variously, and, it would seem, indiscriminately, called " bronchitis," " chronic laryngitis," " clergyman's sore throat," &c., consists, in Dr. Green's opinion, *primarily and essentially in a diseased condition of the glandular follicles of the mucous membrane of the throat, larynx, and trachea.* This disease he looks upon as being, in the first instance, inflammatory; but as liable to terminate in *ulceration, hypertrophy, induration, or in a deposition of tuberculous matter in the follicles themselves.* The affection, moreover, he states, may be confined to the mucous glandulæ of the fauces and pharyngo-laryngeal membrane, or be complicated with diseases of the tonsils, uvula, or air-passages. It is wrong, however, to suppose that this affection is peculiar to public speakers, for of nearly four hundred cases which have fallen under our author's observation, " only about seventy-eight, or one in five of this number, were in any way public speakers."

The general symptoms of the disease are sufficiently well known, and are, in our own experience, common to most disorders of the throat and fauces : consisting, as described by the author, of an uneasy sensation in the upper part of the throat, a frequent inclination to swallow, repeated attempts to clear the throat, and an alteration in the quality or *timbre* of the voice,—caused by a loss of power in the vocal organs, and hoarseness. In the cases which we have seen, however, there has been a symptom invariably present previously to any of these, and which seems to have escaped the attention of Dr. Green, viz., a constant sensation of *dryness* in the throat, as if it were not lubricated by the natural secretions, and which patients complain that they cannot remove by drinking. This stage of the disease may last for years, the symptoms dis-

appearing almost entirely at times, but being always aggravated by vicissitudes of temperature, and by increased exercise of the vocal organs:

"If we inspect the throat and fauces during the progress of the above symptoms, we shall find the epithelium, which, in the healthy state of the mucous tissue, covers its surface more or less, destroyed, its absence being manifested by the slightly raw or granulated appearance which the membrane presents; the mucous follicles will be found hypertrophied, and will appear distinctly visible, especially those studding the upper and posterior part of the pharyngeal membrane. If the disease has been long continued, a portion of the follicles may be found indurated, or, in some instances, filled with a yellowish substance, having a resemblance to, and presenting the physical characters of, tuberculous matter; whilst striæ of opaque, adhesive mucus, or of a muco-purulent secretion, may be seen hanging from the veil of the palate, or coating the posterior wall of the pharynx. As the disease advances, and the follicles situated at the root of the epiglottis and in front of the arytenoid cartilage, and the still more numerous glandulæ of the laryngeal mucous membrane, become involved in the morbid action, all the above symptoms appear greatly aggravated; the hoarseness is much increased, and is constant; speaking or reading aloud is attended with great difficulty, and, when continued for any period, is followed by pain and increased soreness in the region of the larynx, and by a sensation of extreme languor not only about the vocal organs but throughout the whole system. In some cases, where the disease affects the glands situated in the ventricles of the larynx, and near the vocal chords, the voice becomes completely extinguished; or if, by great effort, the patient essays to speak aloud, the vocal resonance is uneven, harsh, and discordant."—pp. 51, 52.

The author illustrates the appearances of the different stages of the disease by means of coloured drawings, made from cases under his care, and the details of which are given in the present volume; and, allowing for a little exaggeration in the colouring, they seem to be faithful representations of this peculiar disease of the throat and pharynx.

In speaking of the *pathology* of this affection, the author admits that follicular disease occurs more frequently in the intestinal mucous membrane; differing, however, from the generally received opinion, that the presence of disease in the glandulæ of the respiratory system is of rare occurrence, and asserting, that when it does occur there it is generally overlooked or attributed to other lesions. The cause assigned by Dr. Stokes for the increased frequency of disease in the gastro-intestinal mucous glandulæ,—their greater exposure to chemical and mechanical stimuli,—he endeavours to disprove by a refe-

rence to their anatomical structure; the follicles of the stomach and duodenum being situated in the submucous tissue, and numbers of them having their ducts united in one common excretory tube, which, except during the period of digestion, remains constantly closed; and the glands of Peyer (which of the intestinal follicles are the most frequently diseased) being close sacs. The validity of this reasoning we cannot at all admit, for the truth of Dr. Stokes' observation, that the intestinal mucous follicles are more exposed to chemical and mechanical irritation, and the fact of their being more frequently diseased, being both unquestionable, we cannot see the force of any argument derived from their anatomical structure. Moreover, if we investigate the appearance of intestinal follicular ulcers, we shall find that they are invariably cup-shaped,—proving that the disease had commenced in that portion of the glandulæ which is in most immediate contact with the intestinal mucous membrane, or rather passes from the mucous membrane to the follicles. Another argument in support of Dr. Stokes's statement may be derived from a reference to the affections in which the follicles of the intestines are found to be most frequently diseased,—tubercular phthisis, chronic diarrhœa, and dysentery,—in all of which the intestinal mucous membrane is especially exposed to the irritation of both chemical and mechanical stimuli. Dr. Green's observation as to the infrequency of follicular disease in the œsophagus, which is exposed to the same exciting cause, is, we think, of no avail; for any substance, except it be of a highly corrosive or irritating character, can have but little action on the œsophageal mucous membrane, in consequence of the short time it is in contact with it.

Amongst the most important of the predisposing causes of follicular disease of the air passages, our author places *hereditary tendency*, and quotes numerous cases from his own practice in proof of the fact. That the disease is hereditary we do not for a moment mean to dispute; but that it is so is, we think, rather dependent on the occurrence of the affection chiefly in scrofulous habits, or in individuals who do not enjoy a fair share of "fresh air and of the sun's rays,"—another of the predisposing causes mentioned by Dr. Green. *Regular* exercise of the voice, so far from producing a tendency to, or more directly exciting disease of the vocal organs, tends to strengthen them, just as daily use of a particular set of muscles increases their development; it is *irregular* employment of the voice, the use of it in public speaking, when an individual is suffering from cold, or a sudden and strained effort to speak at any time, that frequently gives rise to this affection. It is to the first

of these causes we must attribute the common occurrence of the disease among clergymen, and which, in America, has acquired for it the name of *clergyman's sore throat:*

"Remaining quiescent, or nearly so, during six days of the week," writes Dr. Green, "these organs on the seventh are required to perform a more than double duty; and this too when, from the fact of their having been so long at comparative rest, they are less capable of enduring the fatigue than if the muscles of which they are composed had been subjected to daily exercise in public speaking."—p. 171.

The treatment of the disease Dr. Green considers, in the first place, with reference to the topical applications which are to be employed: and afterwards treats of the general remedies which he has found useful. It is to the former, or topical plan of treatment, that he devotes most attention; and as it presents some novelty, it is to it that we wish chiefly to call the attention of our readers.

Numerous remedies have been at various times proposed for the local treatment of chronic diseases of the larynx and pharynx, a short notice of which will be found in our review of MM. Monod's and Martin's treatise on Special Therapeutics, in the first volume of our new series; but it is to MM. Trousseau and Belloc that the honour belongs of having originated the topical plan of treating laryngeal phthisis, and their claim is allowed by Dr. Green.

Of the many substances which have been employed for this purpose, nitrate of silver in solution is very generally admitted to be the most efficacious. MM. Trousseau and Belloc employed a solution of the strength of two drachms to the ounce, or sometimes to the half ounce, of distilled water. Their method of applying it was either by means of a small silver syringe, with a long curved tube, which could be introduced beyond the epiglottis; or by saturating a bit of sponge attached to a rod of whalebone, which, being pressed firmly against the back of the pharynx, discharges some of the solution into the glottis, principally by the involuntary effort of deglutition which it excites. This latter method we have ourselves frequently used, and with much success. But Dr. Green has found another method of applying the solution to the laryngeal mucous membrane, so simple and so efficacious, that, as we before remarked, he has been induced to publish this volume upon its merits. We shall permit him to speak for himself, premising, that he prefers the crystals of the nitrate of silver to the pencils for preparing the solution, inasmuch as the latter often contain nitrates of potash, copper, or lead.

"*Method of applying the Solution.*—In the treatment of laryngeal disease by the direct application of the nitrate of silver to the diseased surface, I have employed ordinarily a solution of this substance, of the strength of from two to four scruples of the nitrate to an ounce of distilled water. When, however, there are found extensive ulcerations of the epiglottis, or about the opening of the larynx,—ulcerations which it is desirable to arrest at once,—I have not hesitated to apply directly to the diseased parts a solution of double the strength of the last-named. But one or two applications only of a medicine of this power should be made at one time; ordinarily, however extensive the lesions may be, it will not be necessary to employ a solution of greater strength than one composed of four scruples of the salt to an ounce of water. On the other hand, it has been found that one of less strength than of from forty to fifty grains of the nitrate to an ounce of fluid will have but little effect upon a diseased mucous surface where ulcerations exist.

"In cases in which it becomes necessary to cauterize the interior of the laryngeal cavity, the aperture of the glottis should not be passed at once; the part should be *educated* by applying the solution daily for several days to the faucial and pharyngeal region, to the epiglottis, and about the opening of the glottis.

"Proceeding in this manner, that exquisite sensibility which belongs to the lips of the glottis is, in a good degree, overcome; and the instrument may then be passed into the larynx, without producing half the amount of that irritation which its introduction below the epiglottis would have awakened at first.

"The instrument which I have always employed for making direct medicinal applications into the cavity of the larynx is one composed of whalebone, about ten inches in length (with or without a handle), curved at one end, to which is securely attached a small, round piece of fine sponge. The extent to which the rod is to be bent must be varied according to circumstances, for the opening of the glottis is situated much deeper in some throats than in others; but the curve which I have found suited to the greatest number of cases is one which will form the arc of one quarter of a circle whose diameter is four inches.

"The instrument being prepared, and the patient's mouth opened wide, and his tongue depressed, the sponge is dipped into the solution to be applied, and being carried over the top of the epiglottis, and on the laryngeal face of this cartilage, is suddenly pressed downwards and forwards, through the aperture of the glottis, into the laryngeal cavity. This operation is followed by a momentary spasm of the glottis, by which the fluid is discharged from the sponge, and is brought into immediate contact with the diseased surface.

"If the patient, on opening his mouth, take a full inspiration, and then be directed to breathe gently out at the moment in which the sponge is introduced, the irritation caused by the application will be much less than when this caution is not observed. The fact,

indeed, has been fully established by repeated experiments, that the introduction into the larynx of a sponge saturated with a solution of the crystals of nitrate of silver, of the strength of forty, fifty, or even sixty grains of the salt to the ounce of water, does not produce, ordinarily, as much disturbance as is caused by the accidental imbibition into this cavity of a few drops of tea, or even of pure water."—pp. 199–201.

When follicular disease of the throat is complicated with elongation and enlargement of the uvula, or with hypertrophy of the tonsils, Dr. Green recommends the removal of these parts by excision, but there is nothing novel in his mode of operation.

The presence of tubercular phthisis in individuals affected with follicular laryngitis, is, in the author's opinion, no hindrance to the topical plan of treatment he proposes: indeed, in cases of what are termed laryngeal phthisis, in which the disease of the larynx is of a true tuberculous nature, he has repeatedly employed it, and, it appears, with very great benefit.

The topical application of nitrate of silver in solution, when "judiciously and perseveringly employed," Dr. Green has found, in a large proportion of cases, to be a perfect cure for the follicular disease of the air-passages which he describes. Cases, however, in which some other affection of the general system may exist, demand internal remedies also. When such are required, he administers nitrate of silver in pill, with extract of hops or conium, the iodide of potassium, calomel, hydrocyanic acid, the tincture of sanguinaria,—a stimulating expectorant much employed in America, where it is indigenous, but never used in this country,—the muriate of ammonia, or the sulphate of morphia, according to the indication which is to be fulfilled. Cod-liver oil he does not appear to have employed, although its efficacy in this affection, occurring in debilitated, scrofulous habits, is unquestionable.

In an Appendix are given numerous letters from physicians of eminence in the United States, who have seen Dr. Green employ his method of applying the solution of nitrate of silver to the larynx, and many of whom have themselves used it with success,—indeed some of them have experienced its efficacy in their own persons: in which testimony is borne to our author's skill, and to the success of his plan of treating this obstinate affection.

These testimonies prevent us from offering any opinion as to the facts we have laid before our readers, inasmuch as *our* views could be based on theoretical notions only,—time not

having permitted us to test them practically yet. We shall only say, that we are fully convinced of the originality of observation displayed by our author, and of the perfect truth of the statements contained in his Treatise.

A Manual of Materia Medica and Therapeutics, including the Preparations of the Pharmacopœias of London, Edinburgh, and Dublin, with many new Medicines. By J. Forbes Royle, M.D., F.R.S., &c., &c., Professor of Materia Medica and Therapeutics, King's College, London. 12mo. London, Churchill. 1847. pp. 716.

Natural history, chemistry, pathology, and diagnosis, are progressing daily, with parallel and rapid strides. These sciences constitute the foundation of materia medica, and it might be expected that the latter branch of knowledge would share in this general advancement; and it must be admitted that pharmacologia has lately received many important boons from these several sources. The naturalist has given to it matico, Indian hemp, and bebeeru; the chemist has revealed to it a host of valuable medicinal agents; and the pathologist and physician have not been slow to study the action of proposed remedies, and to endeavour to ascertain the diseases in which they might be found serviceable. No doubt, also, the pharmacologist has exercised much industry and research in determining the characters of the different varieties of drugs found in commerce, in detecting their adulterations, and inventing methods by which their purity can be ascertained; he has, besides, displayed much ingenuity in the discovery of formulæ; and the different pharmaceutic operations have received deserved attention; the therapeutic uses of many medicines are also now well understood. Yet, we must confess, in all that regards that inductive generalization which can alone warrant the appellation of science, in the art of predicting the unknown by the assistance of the known, materia medica, at this day, as little deserves the name of "science," as it did in the time of Bichat. There are many books in existence, which will tell the botanical description of the trees from which a bark is obtained, will minutely describe its chemical analysis, and perhaps add the additional information that it is a "bitter tonic, useful in advanced stages of dysentery and diarrhœa;" but there is scarcely any work in print which will guide a practitioner who desires a remedy for a particular indication in disease. Materia medica is, in sad truth "an undigested mass."

This it is which encourages the charlatan, and enfeebles the

advocate of science; pharmacologia is known to be the pregnable point in the ramparts of medicine; to this are directed the assaults of the homœopathist and hydropathist; and until the problem be solved,—*the lesion being given, to find its remedy*,—complete medical education will be impossible. As it is, the student may be taught pathology, he may be instructed in diagnosis, but treatment he can only learn by "experience," a sad preceptor.

We do not blame Dr. Royle for not having satisfied the desire which every conscientious practitioner must feel for a scientific work on materia medica. Probably the time has not arrived for attempting such a work. Physiology and pathology have yet much to achieve, and therapeutics must wait upon their progress. Nor is it likely that a single individual will, at any time, arise with qualifications adequate to the completion of an undertaking so Herculean.

That which Dr. Royle has attempted in the little work before us he has well executed. He has written a manual which will be found extremely serviceable to the student. It contains, in a most concise and lucid form, botanical descriptions, explanations of chemical processes, pharmaceutical formulæ, &c. We cordially recommend it to students preparing for examination, as it is calculated to economise their money and labour.

On the Causes and Treatment of Abortion and Sterility; being the result of an extended Inquiry into the physiological and morbid Conditions of the Uterus, with reference especially to leucorrhœal Affections and the Diseases of Menstruation. By JAMES WHITEHEAD, F. R. C. S., &c., &c. 8vo. London, Churchill. 1847. pp. 426.

THE reader may be aware, from the title of this work, that the object of the author is much more extensive than at first sight would appear; it is, in fact, a Treatise upon the Diseases of Menstruation, Signs of Pregnancy, Abortion, and Sterility. We shall endeavour to give a slight sketch of the author's views upon each of these points.

For some years past he has been carrying on a series of careful examinations, by means of the speculum, into the peculiarities of menstruation, as connected with abortion, and into the special causes of abortion and premature labour; and he has here given us the results. Whilst disclaiming originality, he seems to think that no similar investigations have been undertaken by others, with the exception of Dr. Bennett.

Without professing to know how far the speculum has been used in London since 1831, we do know that it has been longer in use here; and we venture to say, that there are few facts in Mr. Whitehead's volume which are not familiar to practitioners in this city. As to the speculum proposed by Mr. Whitehead, we do not see any peculiar advantages which it possesses over the ordinary glass speculum, and we would certainly recommend that the four-bladed expanding speculum should be employed the first time, as by its means a much more extensive and accurate knowledge of the disease may be obtained. We quite agree with the author as to the mode of using it:

"The proper and most convenient mode of prosecuting specular inquiry, and of managing the local treatment, is to have the patient reclined on her left side, upon the edge of a bed or couch, in the same position as that employed in this country during the process of parturition. The instrument is introduced without ocular aid, and no part whatever of the person is exposed."

The remedies can be applied by means of a camel's-hair pencil, or, what is better, of a small roll of lint held by a long pair of dressing forceps.

Menstruation occurs monthly, i. e. about every twenty-eight days, and lasts from four to seven days; but there are considerable deviations from this regularity, even without injury to health. To ascertain the frequency and amount of this variation in *healthy* females, Mr. Whitehead made careful inquiry, and found that, of 520 females who were what is called *regular*, "359 had always menstruated regularly, no particular difference being observable either in the length of the interval between one period and another, or in the number of days during which the menses continued to flow:" of the remaining 161 cases, in fifty-one menstruation occurred every lunar month, with a prolongation of the discharge every third or fourth return; thirty-eight every lunar month generally, but every third or fourth time from four to seven days earlier; fifteen had the menses every three weeks generally, but every third or fourth return from four to seven days later; fourteen, every twenty-four days, but occasionally the interval was twenty-eight days; five, every five or six weeks, with an interval of only a month occasionally; two, every eighteen days, with a longer interval now and then; one, every lunar month, with an additional discharge in the middle of every third interval; two, every fourteen days, with occasional prolongations of the intervals; one, every month, but missed every third without injury; and in thirty-two no regularity was observed.

The quantity of menstrual fluid seems, according to our author, to be increased by high temperature. He has quoted Dr. Letheby's analysis (Lancet, August 2, 1845), apparently agreeing with its statements; the uterine mucus he has always found alkaline, the vaginal mucus very rarely so; the menstrual fluid is always acid, but of varying intensity; it resembles venous blood, but is less viscid, and it does not coagulate. No doubt can exist that it is secreted by the uterus, and "that every part of the organ, including the upper part of the cervix, is, perhaps, equally engaged in the performance of the function."

The following Table shews the ages at which menstruation commenced in 4000 individuals:

At the age of	10	years,	9	first menstruated.
,,	11	,,	26	,,
,,	12	,,	136	,,
,,	13	,,	332	,,
,,	14	,,	638	,,
,,	15	,,	761	,,
,,	16	,,	967	,,
,,	17	,,	499	,,
,,	18	,,	393	,,
,,	19	,,	148	,,
,,	20	,,	71	,,
,,	21	,,	9	,,
,,	22	,,	6	,,
,,	23	,,	2	,,
,,	24	,,	1	,,
,,	25	,,	1	,,
,,	26	,,	1	,,

Thus the average age of the first menstrual crisis is fifteen years and nearly seven months. Of these 4000,

"2127 were employed in mills, warehouses, and places connected with the various processes of manufacturing, at the period of puberty, and for a length of time previous to its advent. Their collective ages amounted to 33,396, affording an average of *fifteen years and nearly eight months;* of whom 551, or 24.02 per cent. suffered under disease consequent upon undue retardation of the functional changes at the commencement. The remainder, 1873 in number, included all that were otherwise circumstanced, as domestic and farm servants, hawkers, sempstresses, and shopwomen, together with a number of educated females, not necessarily engaged in any pursuit, except school exercises. The sum of their ages was 28,982, giving *fifteen years and about five months* as the average age of puberty, and 375, or 20.02 per cent., experienced functional difficulty in form of amenorrhœa at the outset."—p. 81.

Mr. Whitehead enters at length into the influence of temperament, constitution, and climate upon the catamenial function, but as nothing new is added to our knowledge, we shall pass on to the diseases.

Amenorrhœa, when no mechanical impediment exists, and where the organic development is complete, will most usually be accompanied by a series of symptoms indicative of general or local plethora, and marked by quickened circulation, hurried breathing, *malaise*, occasional rigors, thirst, &c., or, if the constitutional powers be feeble, by a chronic state of ill health:

"The remedial measures indicated are obvious. The first object will be to moderate the inordinate vascular action, to tranquillize the exalted sensibility of the brain and nervous system, and to rectify and restore the vitiated secretions. The ultimate aim should be especially directed to the menstrual functions, their establishment and due performance being essential to the immunity of the system from future mischief."

The remedies employed in the cases he relates were hip-baths, poultices to the abdomen, external irritation, aperients, and chalybeates.

Sudden suppression of the menstrual flow may be followed by very serious results. The author gives cases of acute peritonitis, partial paralysis, hysteric fits, asthma, cerebral congestion, and apoplexy, resulting from this cause.

Dysmenorrhœa has its origin, according to Mr. Whitehead, in a morbidly irritable state of the uterus, or of those parts of the nervous system in immediate relation with it; but he has not minutely or clearly described this irritable state, nor has he added anything to the treatment.

Four cases of vicarious menstruation are given: one from the nose; another vicarious leucorrhœa; a third from the surface of an ulcer; and a fourth in the form of periodical diarrhœa.

In treating of menorrhagia, the author very properly alludes to the frequency of disease of the cervix as a cause; we believe that this has been very much overlooked. We have repeatedly detected great congestion, a varicose state of the vessels, enlargement of the glandulæ Nabothi protruding at the orifice, and superficial ulceration or fissures of the cervix, giving rise to these attacks.

"The treatment to be adopted in these cases will necessarily vary considerably according to the state of health of the individual, the circumstances under which the patient may happen to be placed, the nature of the constitution, the quantity and properties of the

discharge and the causes to which it is to be referred; because in some instances immediate abstraction of blood may be called for; in others, the soothing plan, such as may be effected by the administration of opiates and other sedatives, is indicated; and sometimes a course of alterative and tonic treatment may be beneficially practised."

No specific remedies are named, nothing but cautious, general directions given, very good as far as they go, but of very little practical use; and, we must conscientiously add, that, from the amount of experience the author claims credit for, we should have expected more detailed and precise information than we have found in this section on the diseases of menstruation. There are two most valuable remedies in menorrhagia, cold and ergot of rye, which, in suitable cases, rarely fail; to these we can add a third, the tincture of Indian hemp, as prepared by Mr. Donovan of this city. As we are not aware of its having been already recommended in this disease, we feel bound in justice to mention, that our attention was first directed to its employment in menorrhagia by Surgeon Maguire, of Chapelizod. He found it very useful; and on his recommendation we have tried it with great success in doses of from five to ten drops three times a day. It seems to control all menorrhagic discharges except those which proceed from a breach of surface; and we have found it very valuable in the hæmorrhage preceding and threatening abortion, provided such be not excessive.

Passing over the section on the Signs of Pregnancy,—which will not supersede Dr. Montgomery's description,—we shall next notice the two ostensible subjects of the volume, Abortion and Sterility. Mr. Whitehead finds, from calculations, that the actual period of child-bearing is twenty years; the average age of its commencement being twenty-one and a half years, and of its termination about forty-one and a half; there being a period of nearly six years after the last child-birth which is unfruitful, although menstruation recurs regularly. He states the proportionate number of pregnancies for each individual to be twelve, which appears to us rather high, but this includes abortions, false conceptions, and premature births; the average amount of which is one and a half for each individual on a calculation of 2000 persons.

"It is popularly believed that early, especially first pregnancies, have more frequently a premature termination than those which come after. This does not accord with the results of my observations. I am inclined to believe that the third and fourth, and subsequent pregnancies, and one or two of the last,—those, namely, which occur

near the termination of the fruitful period,—are most commonly unsuccessful. 226 of the individuals alluded to in the preceding table were the second time pregnant, of whom 20, or 8·8 per cent., had aborted of the first; and 230 were the third time pregnant, of whom 58, or 25·20 per cent., had previously aborted."

In 602 cases the period of pregnancy at which abortion or premature labour took place, was as follows: thirty-five at two months; 275 at three; 147 at four; thirty at five; thirty-two at six; fifty-five at seven; and twenty-eight at eight months.

Mr. Whitehead investigated the cause of abortion in 2000 instances, and found that "747 had aleady aborted once at least; to some the event had occurred several times." The sum of their abortions was 1222. The following are the causes to which they were attributed:

"Inward weakness, impaired state of health generally, and acute diseases, in . . .	911 cases.
Accidents, mental perturbation, &c. . .	221 ,,
No assignable cause	90 ,,
	1222"

This "inward weakness" is vaginal or uterine leucorrhœa, and in a great proportion of cases arises from disease of the cervix uteri: thus of 378 cases of abortion, 275 exhibited disease of the lower part of the uterus; and of 2000 pregnant women, 1116 were found to labour under leucorrhœa. This, then, is a serious question, and the author has devoted some space to its investigation.

Of the individuals who attributed their abortion "to inward weakness," 275 were examined with the speculum, either before, or within three or four weeks after the event took place, and in every case disease of the lower, or of the internal part of the uterus, and, in a few instances, of the vagina, was found to exist.

"The symptoms which denote the existence of disease of the uterus are susceptible of scientific arrangement; their seat and character, and the order of their occurrence, being founded upon physiological principles. They may be divided into *pathognomonic*, or those signs which require for their development the existence of the disease in question; and into occasional or accidental disturbances, the latter being common to this as well as to other forms of disease capable of deranging the health generally. Of the former class are: first, leucorrhœal discharges, whether these be simply of a mucous character, or mixed in a variable quantity with pus, sanies, or blood,

provided the latter be not the natural product of menstruation; accompanied, secondly, with an indefinable deep-seated aching of the lower belly. Thirdly, a fixed pain of a peculiar character on one or both sides of the body near the groin, occupying the situation of the inguinal canal, and being generally unaccompanied with swelling. Fourthly, aching of the loins, implicating the region of the kidneys and upper part of the os sacrum. Fifthly, an involuntary and uncontrollable inclination to compress the lower abdominal viscera, by an effort which is expressively denominated 'bearing down.' Sixthly, rigors, lassitude, and remittent feverishness. Amongst the other class of symptoms may be enumerated, disturbance of the urinary organs, as frequent desire to void the urine, with inability to do so with comfort; wandering pains around the chest and abdomen, along the spine, throughout the limbs, and about the back part and summit of the head and face; nausea, loss of appetite, painful digestion, irregular bowels, cramps, palpitation, hysteric fits, convulsions," &c.—p. 279.

The peculiar forms of disease which may give rise to these symptoms, and which cause abortion, are, first, inflammation and superficial erosion of the lower part of the uterus; second, varicose ulceration; third, œdema of the womb; fourth, fissured ulceration of one or both commissures; fifth, induration of the cervix; sixth, endo-uteritis, or inflammation of the lining membrane of the womb; seventh, follicular ulceration; eighth, gonorrhœal virus; ninth, syphilitic disease; tenth, prolapsus uteri.

Most of these have long been regarded as at least occasional causes of abortion; but we believe that Dr. Bennett was the first to bring before the profession in this country the views of M. Boys de Loury, as to the frequency of erosion and ulceration as a cause of miscarriage and premature labour. Mr. Whitehead, apparently by independent investigations, has arrived at the same conclusion, and we can confirm their observations.

The treatment upon which Mr. Whitehead relies in *erosion of the cervix* is leeching (when the system will bear it) of the hypogastrium or os uteri, anodynes, and lunar caustic to the ulcer. We have found great benefit from the use of the strong nitric acid in the first instance, and afterwards of the caustic tincture of iodine.

In addition to the caustic applications, some astringent, as a solution of sulphate of zinc, with wine of opium, tincture of matico, &c., will be necessary in *varicose ulcer*, with a due attention to the general health.

In *œdema of the cervix uteri* "the treatment indicated is almost entirely constitutional. Small general bleedings should

be practised at intervals, with the exhibition of calomel and digitalis in moderate doses, and saline aperients, combined or not with quinine, as occasion may require."

Fissured ulcer of the cervix is to be treated by alteratives; in some cases by leeching, tonics, and the solid nitrate of silver.

In *endo-uteritis* "the treatment consists in general or local bleeding, regulated according to the strength of the patient and the urgency of the symptoms; in the exhibition of alterative and soothing medicines; and in injections within the uterus, when unimpregnated." With regard to the latter remedy, the author has previously (p. 163) recommended a "weak solution of the nitrate of silver, with extract of hemlock, or an ointment of the same material;" and he states that no "disturbance or discomfort arises from these measures." This does not tally with our experience; on the contrary, we have seen violent pain follow injections into the uterus, and in France severe consequences have often resulted.

We must pass over the treatment of the remaining causes of abortion, in which Mr. Whitehead proposes nothing new, and say a few words upon the last section of the work, on sterility. The only cause upon which the author dwells at length is chronic endo-uteritis, or irritable uterus, and this, he states, may prevent pregnancy in three ways:

"In the first place, the inflammatory action going on within the uterus, and which is liable to be aggravated under states of venereal excitement, may prevent the formation of the membrana desidua, and the ovum, even though impregnated, is necessarily thrown off without any manifestation of its existence in the fertilized state; secondly, the diseased condition of the lining membrane of the uterus may be extended to the Fallopian canals, obliterating for a time their internal orifices, so as to oppose an insurmountable obstacle to the admission of the spermatic fluid within them, and thus to render the fertilizing effort abortive; thirdly, the nature of the secretion furnished by the internal surface of the uterus or of the vagina, under certain states of disease, may be inimical to the active existence of the spermatozoa, occasioning their destruction before they arrive at the extricated ovule."

The researches of M. Donnè have shewn that the spermatozoa are capable of living for some time in the healthy mucus of the vagina or uterus, but that certain changes in this destroy them immediately. One of these changes he found to be an increase of acidity. Now, in ordinary cases, the alkaline mucus of the uterus mixes with the acid mucus of the vagina, and tempers it, but in disease it may either be withheld or may become acid; in either case the spermatozoa will perish. At

least this seems to be Mr. Whitehead's view of the way in which endo-uteritis acts in causing sterility, and it is an ingenious one, and deserving of careful investigation.

In conclusion, we have only to add, that the work is a valuable one, and very creditable to the author; the first part is superficial, but the second is more minutely and carefully written: it would not have been less valuable had there been more reference to modern works on the subject.

[The profession are, perhaps, aware, that some discussion has arisen between Dr. Bennett, of London, and Mr. Whitehead, as to the claims of the former for having first called attention to the use of the speculum in the management of certain uterine diseases in this country. Dr. Bennett undoubtedly deserves very great credit for having, both in his book, and in his Lectures published in the Lancet, impressed upon the profession the urgent necessity of making use of the speculum; but at the same time we are bound to state, that it was an instrument employed by many well educated physicians and surgeons in the British Islands, and among the rest, it would appear, by Mr. Whitehead, long prior to Dr. Bennett's publications. It would seem, however, as if those who employed the speculum either feared to acknowledge it, or wished to keep a knowledge of its value to themselves. In this city it had been not only used extensively, but its employment publicly taught. We can vouch for its extensive employment by Dr. Evory Kennedy in the Lying-in-Hospital in the years 1833 and 1834, in which institution he established wards for the investigation and treatment of diseases of the uterus by its aid; and the valuable collection of drawings (some of which were published in our February Number), which he possesses, were made with the assistance of the speculum during his Mastership of that institution, from 1833 to 1840.—Ed.]

The Human Brain; its Structure, Physiology, and Diseases; with a Description of the Typical Forms of Brain in the Animal Kingdom. By Samuel Solly, F. R. S., Senior Assistant Surgeon to St. Thomas's Hospital, &c., &c. Second Edition. 8vo. London, Longman's. 1847. pp. 688.

On the appearance of the first edition of Mr. Solly's work, in the year 1836, we noticed it briefly in our former Series, and highly commended the method of dissecting and describing the brain from below upwards, recommended by him. We remembered too well the difficulties we experienced in our own days of studentship, in attempting to imprint on our memory

a dry list of the names of the various parts of the brain, the functions of which we thereby obtained no aid in comprehending, not to hail with delight the proposal of a means for examining that organ, by which the parts would be described "with reference to their structure, their functions, and their analogies in the nervous systems of the lower orders of animals."

In our review of the present edition we propose to confine our attention chiefly to the section on the pathology and diseases of the brain, which extends to 350 pages, and which is altogether new. Before proceeding with our task, however, we think it well to lay before our readers a recapitulation of the anatomical portion of the book, the more especially as a knowledge of it is requisite to a right understanding of the views propounded in the pathological, and this we do in the author's own words:

"The description of the course and termination of the various tracts of medullary neurine which, with their ganglia, constitute the brain or encephalon, being now concluded, it will, I think, be useful to take a general review of the subject, by a recapitulation of what has been stated in detail separately; and we will reverse the order of our observations, proceeding from above downwards instead of from below upwards.

"In the first place, we have an extensive surface of cineritious neurine, the *hemispherical ganglion* (speaking merely of one side of the brain), which, in the higher orders of animals, is convoluted or folded in a peculiar manner.

"In apposition to the whole of the vesicular neurine of this ganglion, there are tubular fibres which radiate through it, and are incrusted by its nucleated cells.

"These fibres are disposed of in four different ways: 1st, some of them, commencing from the convolutions of the anterior, middle, and posterior lobes, pass through the corpora striata, and, forming the inferior layer of the crus cerebri, pass through the pons Varolii, so as to form the anterior columns of the cord, as previously described—the *motor tract;* 2nd, others commencing in the nerves of sensation, and after passing through the pons Varolii, and emerging from the substance of the thalamus, terminate in the same neurine that gave origin to the last—this is the *sensory tract;* 3rd, others, passing from one side of the brain to the other, and in apposition to the internal surface of all the convolutions, are those fibres which, collected into a mass, form between the hemispheres that wide bridge, if I may so call it, the *great transverse commissure* or *corpus callosum;* 4thly and lastly, in contact with all the convolutions are the fibres of the superior and inferior longitudinal commissures, which, connecting together those convolutions which are situated on the same side of the mesial line, or different portions of the same hemispherical ganglion, so far differ from the trans-

verse commissure, which connects those situated on opposite sides, or the two distinct but corresponding ganglia.

"The first and second set of fibres, which radiate from the external surface of the two large ganglia of the anterior and posterior columns, as from a common centre, forming, however, in their radiation, only half a circle, were designated by Gall and Spurzheim the *diverging fibres*. The third set of fibres, which converge towards the centre of the brain, the transverse commissural, were distinguished as the *converging fibres* by the same author.

"The above descriptions demonstrate that the encephalon or brain in the human subject is not a large solid mass of matter, in the interior of which are cavities scooped as it were out of its substance to be appropriately denominated ventricles, but that it really consists of ganglia or collections of cinerituous neurine, placed on each side of the mesial line. Some of them being the appropriate ganglia of the nerves of sensation; as, for instance, the olfactory ganglia, the optic ganglia or tubercula quadrigemina, the auditory ganglia or posterior pyramidal bodies, the pneumogastric ganglia or restiforme ganglia, the olivary bodies or lingual ganglia; the others being the motory and sensory ganglia, as the corpora striata and thalami nervorum opticorum. The hemispherical ganglia again, that they might present the greatest possible extent of surface, are folded up into innumerable plaits, and thus cover or surround every other ganglion within the cranium, so that on first removing the skull-cap nothing can be seen but the convoluted surface of these extensive ganglia.

"And here let me insist upon this important principle in the study of the brain, which is also one of the first ideas that the student should acquire regarding its composition, namely, that it consists of corresponding or symmetrical parts on each side of the mesial plane, and that instead of regarding the fissures of separation between its different portions as forming ventricles or cavities, he must direct his attention to the ganglia which bound the fissure, and the structures called commissures, which, connecting them together, cross the fissure and necessarily alter its character in different points, masking it, it is true, but not at any place changing the fissure into a true bag or circumscribed cavity. The third, the *ver a tenio ad quartum ventriculum*, the fourth, and fifth ventricles, we have already seen, are, in truth, no more than the successive dilatations from below upwards of the posterior fissure of the cord: difficult enough to be understood when these are viewed in different situations and unconnected one with the other, as in the ordinary mode of dissecting the brain, but which seem necessary and obvious where its parts are traced in connexion with one another."—pp. 280–282.

In describing the diseases of the brain, Mr. Solly classifies them as follows: 1. Anæmic affections: 2. Hyperæmic; 3. Convulsive; and 4. Organic. A classification which, sufficiently

simple, and apparently sound in theory, is, we think, but little adapted for practice. Do we not daily meet with anæmic and hyperæmic apoplexy? Are not convulsions nearly as often connected with a deficient as with an over supply of blood to the cerebral organs? And are not convulsive disorders most generally dependent on organic disease of the brain? What, then, can tend more to confuse the mind of the student than an arbitrary and deceptive classification such as this? For practical advantages, the best method of describing the diseases of the cerebro-spinal system, is, we think, under the three heads of: 1. Affections of the brain, and its membranes; 2. Affections of the nervous system; and 3. Affections of the spinal cord and its membranes.

Before proceeding to speak more immediately of the pathology of diseases of the brain, the author notices the views which have been held as to whether the quantity of blood circulating within the cranium ever varies; an account of which views we have already given to our readers in the review of Dr. Burrowes' Treatise on Disorders of the Cerebral Circulation, in our last volume. We wish, however, to repair here an omission which we then made, in not stating that Dr. Graves combated the doctrine laid down by Abercrombie, and which was at the time so generally received as correct, a long time before any doubt was thrown on it by Dr. Burrowes or any other writer: a reclamation which we feel the more bound to make, now that our countryman's labours have escaped the notice of Mr. Solly also.

The first disease the author describes amongst anæmic affections of the brain, is delirium tremens: and were we disposed to offer any further arguments against the classification adopted, we might well do so here; for what arrangement could be more faulty, or less natural, than that in which anæmic coma, hydrocephalus, ramollissement, and delirium tremens, are placed in juxtaposition. In his account of the causes of delirium tremens we were surprised at an omission which Mr. Solly, as a practical surgeon, ought not to have made,—namely, not noticing the fact that this disease is very frequently produced, in individuals of drunken habits, by sudden losses of blood attendant on injuries; and this too, although he mentions having often seen the affection in patients, in the surgical wards of the hospital, who had met with some severe injury. He lays great stress, and deservedly, on the necessity of making an accurate diagnosis between the delirium the immediate effect of drink,—*delirium briosorum*,—and true delirium tremens; but he seems

to have often found the diagnosis much more difficult than we have, and, in consequence, suggests the following, which, we cannot avoid calling, very dangerous practice:

"I have almost always found, that when large doses of opium fail in producing sleep, we ought to consider that the case is one of hyperæmia, and not anæmia; and if we change the treatment, relieving the congestion of the brain, sleep soon follows. . . . . Leeches and the cupping-glass are the best agents."—p. 358.

Now, we repeatedly meet in practice with cases of delirium tremens, which resist the steady employment of opiates for forty-eight hours, or even longer, and almost immediately yield on the addition of a fourth of a grain of tartar emetic to each dose of the opiate; a mode of treatment for many years taught in the Dublin school. Such cases, we have no doubt, would prove fatal, were Mr. Solly's depletory measures employed, with the idea of the disease not being true delirium tremens.

Inflammatory diseases of the brain form the first division of *hyperæmic* affections treated of by the author. And here we find the anatomical doctrines, the recapitulation of which is given above, brought to bear immediately on the pathology of the organ. Instead of the classification which is at present in use, and which is adopted in nearly every modern Treatise on the Practice of Physic,—that into diseases of the membranes, *meningitis*, and diseases of the brain itself, *phrenitis*,—Mr. Solly, admitting that inflammation of any single ganglion within the skull can scarcely be present without all the remaining ganglia being more or less affected, proposes the following arrangement when the inflammation is restricted: 1st, Inflammation of the hemispherical ganglion; 2ndly, Inflammation of the upper portion of this ganglion, as contradistinguished from that inflammation which is at the base of the brain; 3rdly, Inflammation of the medullary or tubular substance; and 4thly, Inflammation of the cerebellum.

Let us now see a little in detail what are the characteristics of inflammation, as it affects the vesicular and tubular portions of the brain.

Inflammation of the hemispherical ganglion is usually described as meningitis, although, in most instances, there are no *post mortem* indications of inflammation of the membranes discoverable; increased vascularity of the pia mater depends so much on the position in which the body is placed after death, that it is difficult to be decided on; dryness of the arachnoid is very uncommon; and opacity of this membrane is generally looked upon as being the result of *chronic* inflammation. The

morbid alterations produced in the hemispherical ganglion by inflammation affect both its colour, and consistency—softening and hardening. The natural colour is, according to Dr. Bright, "a light fawn-coloured brown;" in disease, accord-to Dr. Solly,

"The colour varies from a pale tint, scarcely darker than the medullary substance, up to an intense purple; occasionally it assumes a bright scarlet; but we seldom have an opportunity of seeing it in this state, for it is the result of active inflammation, and patients seldom die during this stage of the disease."—p. 398.

With regard to consistency: it varies, when softened, from the slight change only observable from its separating in patches, to the conversion into a pulp nearly as fluid as cream; it is sometimes, but not often, unnaturally hard.

The description given by the author of the "symptoms and effects of inflammation of the hemispherical ganglion" is as follows:

"We will next consider attentively one of the most important laws of vital action which pathology has yet unfolded in relation to the nervous system, namely, that the first effect of the first stage of inflammation of neurine is to excite and exalt to an unnatural degree exactly the same kind of power which we have reason to believe resides in it in a normal state. For instance, the first effect of inflammation of the surface of the brain is to excite the mental faculties, to produce great irritability of temper, and constant restlessness or desire for action. If the inflammation be arrested at this point, the patient recovers his reason; but if it pursues its ravages undisturbed, limiting its destructive effects to the spot where it commenced, without extending to that portion of the brain which is beneath, it annihilates the intellect, but does not effect the muscular system; while, on the other hand, if the inflammation extend further, reaching the instruments by which the will travels to the muscles, it first produces *convulsive action* in these muscles, which afterwards become perfectly paralytic; in this case the integrity of the neurine, through which volition traversed to call these muscles into action, is compromised, and its power, therefore, as an instrument for the production of voluntary motion, destroyed.

"The same phenomena are presented to us by observations on the instruments of sensation, as far as we are at present acquainted with these instruments, for we generally find, when inflammation attacks the tract of sensation (the first symptoms existing a sufficiently long time to be accurately observed), that previous to the obliteration of sensibility in any texture, the normal sensibility of the part is exalted, the patient suffering the most severe pain both at the spot where the nerves of sensation originate, and in the brain itself where they terminate.

"The first effect of unusual arterial action of the hemispherical gan-

glion is to exalt the intellect; this effect is often so transient that it may be unobserved. We meet with a good illustration of it in the effect produced by alcoholic stimuli."—pp. 401, 402.

The views here propounded are based on the two following propositions:

"1st, That the hemispherical ganglia are intimately connected with the intellectual powers, and that it is in them peculiarly, and not in the whole cerebral mass, that these powers reside. 2nd, That the medullary substance beneath is in all probability merely the passive servant, as it were, of the cineritious, either as the conductor of its commands to the muscles, or of the materials, namely, the various impressions made on the peripheral extremities of the nerves of sense, which the cineritious perceives, and with which it works."—p. 402.

We thus find that Mr. Solly lays especial stress on the disturbance of the intellectual faculties, as opposed to derangement of muscular action in the diagnosis of inflammation of the hemispherical ganglion—the sentient portion of the brain. Indeed we fully agree with him in thinking, that the *condition* of the mind does not receive sufficient attention in the attempt, so generally made by the practical physician, to define accurately that portion of the brain which is the seat of disease. It is not, however, to be supposed that the motor powers are altogether unaffected, indeed in many cases they are much deranged, but the derangement consists in the presence of "different kinds of spasms, from a mere trembling, or subsultus tendinum, up to the most violent contraction:" but there is no decided and persistent paralysis.

We cannot agree with Mr. Solly in the propriety of still persisting to call inflammation of the hemispherical ganglion *meningitis*, now that its true seat has been discovered; his argument for using it—its brevity—is surely a bad one. The term *paraphrenitis*, for the use of which we can go as far back as Galen, would be, we think, much more applicable; and *phrenitis* could be restricted to designate inflammation of the tubular neurine, or medullary substance of the brain.

"I never examined after death," says Mr. Solly, "a case in which inflammation was limited to the *tubular portion* of the hemispheres. In those cases on record where this occurred, the disease was ushered in with headach, then convulsions, soon followed by paralysis: if the disease extends upwards and outwards to the hemispherical ganglion, then the mental faculties will be more or less excited and perturbed; if downwards to the ventricles, then, effusion taking place, coma is the consequence."—p. 461.

These pathological facts are highly corroborative of the author's conclusions as to the distinctive offices of the two great divisions of the brain,—the cortical and medullary substances of the older anatomists,—the vesicular and tubular neurine of the modern.

Inflammation of the tubular neurine, or, as we would term it, *phrenitis*, is very insidious in its mode of attack; simple headach, not of a severe character, is usually present for a long time, but this is often unnoticed, and the occurrence of convulsions previously to any sign of mental excitement is in general the first, and certainly the most characteristic symptom, which attracts attention. Coma, or persistent paralysis, usually occurs early in the disease; and the occurrence of vomiting is a symptom of much importance, and one which should not be overlooked. Ramollissement is the morbid change produced in this part of the brain by inflammation, and this alteration occurs in most cases very rapidly.

The author considers at much length the treatment of inflammatory affections of the brain, concluding with the following recapitulation of his views:

"In the treatment of all inflammatory affections of the brain, the following broad principles must be attended to:

"1st. There is no time to be lost,—even minutes are of value.

"2ndly. That inflammation of the brain is a depressing disease, and that, as a general rule, general blood-letting is not often admissible.

"3rdly. That, though general blood-letting may sometimes be attended with benefit at the time, the good derived from it is seldom permanent.

"4thly. That local blood-letting, by leeches and cupping, is generally useful, and especially in cases of insomnolence, arising from abnormal action of the brain.

"5thly. In cases of insanity, where opium has failed to produce sleep, leeches and cold applications generally will; and if they do, it is strong evidence that the excitement arises from hyperæmia, and not from anæmia, as in that of delirium tremens.

"6thly. That aconite and digitalis are the best sedatives, especially when combined with mercury.

"7thly. When it is advisable to salivate rapidly, raise the cuticle by boiling water or a similar escharotic, and dress the surface with the strong mercurial ointment.

"8thly. Always commence the treatment with a brisk mercurial purgative.

"9thly. Soothe the patient's feelings in every way.

"10thly. Never leave anything that is disagreeable to the patient to

be done by a nurse or attendant, such as the application of leeches, &c., but *persuade* him to have them applied.

"11thly. Never lose your patience in the treatment of a chronic case, or try to hasten the cure by increasing the doses.

"12thly. When it is considered necessary to continue the use of mercury for a lengthened period, combine tonics with it."—487, 488.

We have thought it well to give this summary of Mr. Solly's treatment in his own words, although we cannot say that we give our entire approval to the general principles he advances. His arguments in support of them are, however, well worthy of a careful perusal, supported as they are by numerous cases from his own practice and that of others. For these we must refer our readers to the book itself.

The author restricts the use of the term *apoplexy* to designate *cerebral pressure*, whether caused by sanguineous or serous effusion, or by distention of the vessels without extravasation,—such pressure not being the result of direct violence. Having given a general outline of the symptoms both immediate and premonitory of the disease, he proceeds to describe the effects of pressure with reference to the seat of the extravasation. When the effusion takes place into, or on the surface of the *medulla oblongata*,—the former of which seldom occurs,—it produces death more *suddenly* than when it takes place in any other part of the brain; in consequence, manifestly, of this being the respiratory centre. If the effusion be first into the *pons Varolii*, and secondarily into the medulla oblongata, the first effect is paralysis of one or both limbs, without derangement of the intellect,—the hemispherical ganglion being untouched,—gradually followed by paralysis of the respiratory organs, and of death from suffocation.

If the *crus cerebri* be the seat of the extravasation, paralysis of the limbs of the opposite side of the body, and often of the opposite eye also, will be the consequence. Lesions of the *corpus striatum* are invariably followed by paralysis, but not, as some physiologists and pathologists have supposed, of the lower extremities only: Mr. Solly cites a case from Andral, in which the upper and not the lower extremity was the seat of the paralysis.

Morbid anatomy has not hitherto aided much the views of the physiologist as to the functions of the *optic thalamus*, for it often occurs that extravasation here, is followed by paralysis of motion and not by anesthesia, which we would not expect were it the ganglion of the sensory column. In truth, although in many instances, and more especially in those we have now gathered from Mr. Solly's book, morbid anatomy fully confirms

the views of modern physiologists, and the physician can often decide on the precise seat of the lesion in apoplexy, numerous cases occur where both the physiologist and pathologist are altogether at fault, and we are forced to admit that there is something more than mere materiality in the brain.

In effusion into the *tubular* substance of the brain, the intellect recovers completely after the first effect of the shock has passed away: and the most characteristic symptom of pressure on the *hemispherical ganglion* is coma. Both facts are highly corroborative of the use of these parts.

Extravasation of blood into or on the cerebellum is invariably followed by paralysis on the opposite side of the body, the sight and hearing being in general secondarily affected. Mr. Solly states, that in many cases there is also "decided disturbance, generally excitement, of the generative organs;" but this statement does not agree with our experience, nor is it borne out by the cases he narrates; we rather think it had its origin in the author's preconceived phrenological views.

The following observations as to the general principles to be observed in the treatment of apoplexy, are worthy of being borne in mind by every practising physician:

"In the treatment of apoplexy, the first thing to determine is not so much whether the effusion is serous or sanguineous, but whether it is of a sthenic or asthenic character, whether our patient will bear depletion, or whether he is depressed, and whether the disease itself is the result of exhaustion. With regard to our diagnosis of the seat and nature of the effusion, this is more important in relation to our prognosis of this disease than our treatment. I do not mean to undervalue careful diagnosis in these cases; on the contrary, I consider it of the greatest importance, and no pains can be too great which will assist us in coming to a right conclusion. In these cases the friends are of course extremely anxious, and our prognosis, whether favourable or otherwise, must depend on the conclusions we arrive at regarding the cause, the seat, and the nature of the effusion. If the *cause* of the effusion be extreme plethora, and some accidental circumstance, such as posture, or straining at stool, without any disease of heart and vessels, then our prognosis might be favourable. If the *seat* of the effusion appears to be at the base of the brain, but not near the medulla oblongata, then it may possibly be remedial. These are merely illustrations of the fact, that though our treatment may be the same wheresoever the effusion may have occurred, and, in many instances, howsoever it may have been produced, our diagnosis ought yet to be made with the same care, and is of nearly the same value, as if the whole plan of our treatment depended upon it.

"Our remedies in all cases are few and simple. First in the list stands blood-letting, the most valuable remedial agent in some cases, the most dangerous in others. Many a valuable life has been saved by

the prompt and free use of the lancet: more have been hastened into eternity by its indiscriminate employment."—pp. 536, 553.

We have, in our review of Dr. Burrowes' and of Dr. Copeman's books in our last volume, called attention to the dangerous results which followed the general employment of bleeding, which was, and to speak the sad truth, too often is, even now, practised in the treatment of apoplexy. Indeed there are few cases which test more the skill of the medical practitioner, than the *immediate* determination (for such is always requisite), as to whether the lancet is or is not to be used in an apoplectic fit. And when is the physician's resolution more frequently tempted to decide against his better judgment? The popular prejudice of bystanders, or of the patient's friends and family, crying out, "bleed the man, he is in a fit," and the whisper in the physician's ear, "if the patient should die without being bled, the blame will be laid at your door," too often, we fear, succeed in warping the judgment derived from the results of experience. In such cases the only advice we can give is, to shut out from view all ulterior results as regards ourselves, and with a "mens conscia recti," let the termination be what it may, we shall have, what is above all to be prized, the approval of our own conscience.

Convulsive affections are next considered by the author. Just as irritation, or inflammation of the hemispherical ganglion produces mental excitement, so does inflammation or irritation of the tubular neurine cause muscular convulsions. The great importance of convulsions as a symptom, in injuries to the head, is fully dwelt upon, and the rules generally received at present, as to the use of the trephine in such cases, are freely canvassed; it being Mr. Solly's opinion, that, in the absence of cerebral symptoms, the use of the trephine is not justifiable, "unless there is a very decided evidence of a wounded dura mater from splintered portions of the inner table."

Epilepsy is viewed by the author as being primarily an affection of the brain and not of the spinal cord. He propounds the following theory as to the pathology of an epileptic fit:

"The first morbid action is a sudden determination of blood to the brain, which expends itself in the secretion of that nervous power, which, in a state of health, is employed by the brain to convey volition to the muscles, and which power is, I have no doubt, identical with electricity. This excessive secretion is carried off by the motor nerves, like a discharge from an electric battery, and, from its quantity and excess, produces excessive action of the muscles. It is another illustration of a law that we had occasion to decide upon already, namely, that the first

effect of arterial excitement in every secreting organ is to excite to an unnatural degree the natural function of the organ. We know that mental emotion will cause a sudden determination of blood to other organs, which, according to the nature of the part, will be followed or not by secretion.

"Blushing, and erection of the penis, are instances of sudden determination of blood to a particular part. And the lachrymal glands, salivary glands, testicles, prostate gland, gastric glands, and even the kidneys, often pour forth their secretions so abundantly and so suddenly, that the formative fluid, the blood, must have circulated through their capillaries in greater quantity and with greater rapidity than when the glands were at rest, and their secretions suspended. I think that the periodic attacks of mania, with which many of the insane are afflicted, may be regarded in this light.

"The vessels which are especially the seat of this morbid action, I suspect, are those of the choroid plexus, and one of the layers of the cortical substance. The choroid plexus is frequently found hypertrophied in the brain of epileptics, assuming an almost fleshy appearance. This hypertrophy would very probably be the effect of repeated action. It is also the seat of small tumours, generally like hydatids."—pp. 590–592.

Of the various medicines which have been employed in the treatment of epilepsy, Mr. Solly has found the sulphate of zinc, the nitrate of bismuth, the oxide of silver, and digitalis, more or less useful; but it is from the two latter that he thinks he has derived especial benefit. The use of digitalis he states that he derived from Dr. Corrigan's paper in the Dublin Hospital Gazette; but we have reason to know that it originated with the late Dr. Sharkey of Cork; and his son published his own experience of its effects before the date of Dr. Corrigan's first employment of it. We have ourselves administered digitalis extensively in the treatment of epilepsy, and we must express our opinion that it is not the panacea for this disease it was so confidently stated to be. There are unquestionably some cases in which, when its depressing influence is fully manifested, the fits become less frequent; but in *all* such cases that we have seen, the fits return with their original force and frequency on ceasing to use the medicine. Nor can we understand from his published cases, how our author could have arrived at any other conclusion. Its effects as a remedy in epilepsy are well stated in some letters received by Mr. Solly from Dr. Headlam Greenhow, of North Shields,—an eminent provincial practitioner in England, whose name cannot be unfamiliar to our readers,—with reference to a case they attended together, and which are published in the report of that case:

"The only remedy (the digitalis) which has really appeared to control the attacks, has produced much disorder of the general health. In another case in which I have tried the same remedy (a female), the attacks have been less frequent, but have nevertheless returned at regular intervals. I am satisfied that digitalis occasionally exercises a very decided influence over the complaint, and I think it may prove successful in a few instances; but my experience leads me to think its administration requires great caution, and I should scarcely again persist so long in its use as I have done in Mr. S. T. P.'s case."—p. 630.

Again, in another letter:

"I have advised a trial of the digitalis in several cases since Mr. S. T. P.'s, but have not personally superintended the treatment, nor found it exercise the same decided influence which it did in that instance."—p. 632.

The author concludes his volume with a short account of the inorganic diseases and of hyperthropy of the brain; it is an excellent *résumé* of all that is at present known on these subjects; but it does not contain any additions of his own sufficiently novel to require notice.

We have now brought to a close our observations on the second edition of Mr. Solly's monograph on the brain. It will be perceived that, as we stated in the commencement of our review, we have confined our notice to the second part of the book,—that on the *diseases* of this important organ; and of it we have given, we trust, a fair analysis, and one sufficiently full to induce our readers to study the volume itself. We have differed occasionally from our author, but only on some points which cannot in the least affect the value of his original remarks.

We cannot, however, conclude our review without noticing the unfair treatment which the researches of some of our countrymen have met with in Mr. Solly's book; and this has the more surprised us, inasmuch as Mr. Solly's investigations into the nervous system, are in themselves sufficiently praiseworthy to permit him to afford their due meed of praise to others. With reference to the arrangement of the optic nerves and their decussation, he makes no mention of the investigations of Dr. Power, published in the twenty-second volume of our former series, nor of the elaborate article of Dr. Mayne in the Cyclopædia of Anatomy and Physiology. But it is principally with respect to Dr. Todd that we have to complain. Mr. Solly has, indeed, quoted Dr. Todd's book on the Brain, but he has not even *once* mentioned the name of the book he

quotes; referring, in every instance, to the work of Dr. Todd and Mr. Bowman on Physiology, whilst the quotations are taken from the work of the former gentleman only—which was reprinted from the Cyclopædia of Anatomy and published in 1845; thus making it appear that in all his labours Dr. Todd was conjoined with Mr. Bowman. Moreover, the extracts taken from Dr. Todd's book are very scanty,—in some instances garbled; and where opinions are cited, the reasons on which they are based are but seldom given; and this is the more remarkable, as Mr. Solly's volume abounds in long quotations from other writers, to whose works the references are in general most precise.

We regret much being obliged to make these severe remarks, which our sense of justice compels, for Mr. Solly's book is written in the true spirit of philosophic inquiry.

The Dublin Dissector, or System of Practical Anatomy. By Robert Harrison, M. D., M. R. I. A., Professor of Anatomy and Surgery in the University of Dublin, &c., &c. Fifth Edition, with numerous Illustrations. Dublin, Hodges and Smith. 1847. 2 vols. pp. 871.

The intrinsic merit of the Dublin Dissector, as a system of practical anatomy, has been long acknowledged; and has, in no slight degree, contributed to maintain the high reputation which Dublin enjoys as an anatomical school. Since its first appearance in 1827 it has passed through four editions; each succeeding one containing numerous additions and improvements. The fourth having been, for several years, out of print, Dr. Harrison has been induced by his publishers to prepare the present edition; and though we, in common with many others, have often felt disappointment at the unavoidable, but long postponement of its completion, we cannot now regret the delay which has enabled him to produce it in so valuable and perfect a form.

A work which has already received such solid proofs of public approbation, may fairly be supposed to stand too firmly fixed in the favourable estimation of the profession to require either introduction or review; nevertheless, the present edition differs so materially from its predecessors, that we consider it our duty to point out to our readers some of its most prominent and striking improvements.

In order to place his work on a level with the present advanced state of the science, the author has introduced a large amount of new matter, particularly on general or structural anatomy, on the nervous system, and on the different organs of sense. Many articles have been completely rewritten; a few inaccuracies which escaped his observation in the previous editions have been corrected; and the whole revised with much care, so as to render it an accurate and complete, though condensed, treatise on human anatomy.

The descriptions are illustrated by 160 well-executed woodcuts, some of which are from original drawings by a distinguished artist, whilst the remainder are reduced copies of engravings in the most celebrated standard works of the present day. A copious index of the entire, the want of which was much felt in the preceding editions, is also annexed to each volume.

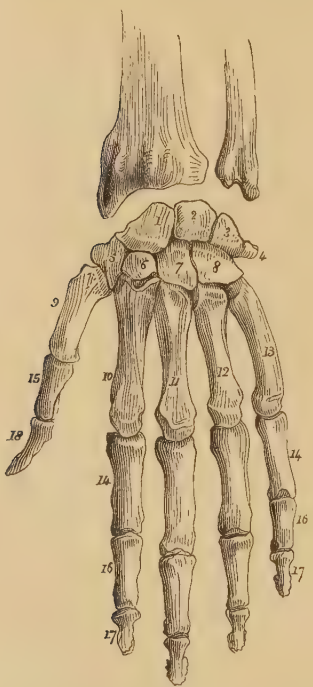
The arrangement originally adopted by Dr. Harrison, and which subsequent experience has shewn to be best calculated to assist and improve the student, is very generally adhered to in the present volumes. In the descriptive details, directions are given as to the best mode of displaying the anatomy of each region, and of obtaining the most correct knowledge of its relations; and particular attention is directed to those parts most useful in a practical, or most interesting in a physiological point of view.

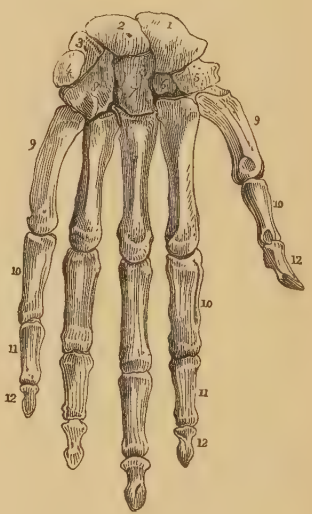
The first volume contains the anatomy of the external parts of the head and face; the anatomy of the neck; of the thorax and its contained viscera; of the upper extremity; of the abdomen, pelvis, and their contents; of the perinæum; of the organs of generation; and of the lower extremity. The second volume comprises the anatomy of the vascular system, including arteries, veins, and lymphatics; the anatomy of the nervous system; of the organs of sense; of the osseous system; and of the articulations. In an Appendix are given some useful directions for conducting *post mortem* examinations, and for making dried preparations of arteries and veins.

Though the eminence of the author as an anatomist, and the high position he at present occupies in the Medical School of Dublin, may be accepted as an ample guarantee for the efficient performance of the task he has undertaken, we shall present our readers with a few extracts and illustrations, as specimens of both the matter and manner of the additions to the Dublin Dissector. An accurate estimate, however, of their extent and value, can only be derived from a reference to the work itself.

In the first volume we find the following remarks introductory to the description of the muscles of the hand:

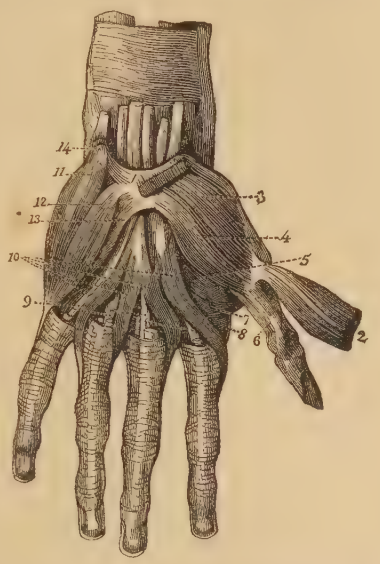
"In conducting the dissection of this region, the student should make frequent and careful reference to its skeleton; we may observe that few portions of the animal frame present more interesting characters for minute anatomical examination than the human hand, as it, most probably, affords the best example that could be adduced, not only of superiority in the human organization, when contrasted with that of any other created being, but also of the most perfect adaptation of structure to function, of means to an end, of design in a plan, and of perfection in its execution. The great number of small bones, twenty-seven in all, with their joints and ligaments so securely connected, and so neatly adapted, as to combine the opposite qualities of strength and freedom of motion, all collected into so





small a space, with the numerous long and slender tendons, elegantly shaped, and each confined in its appropriate highly polished sheath or groove; the muscles of these, some large and strong, others small and weak, all linked together in the closest sympathy, and endowed with powers of executing the most varied motions,

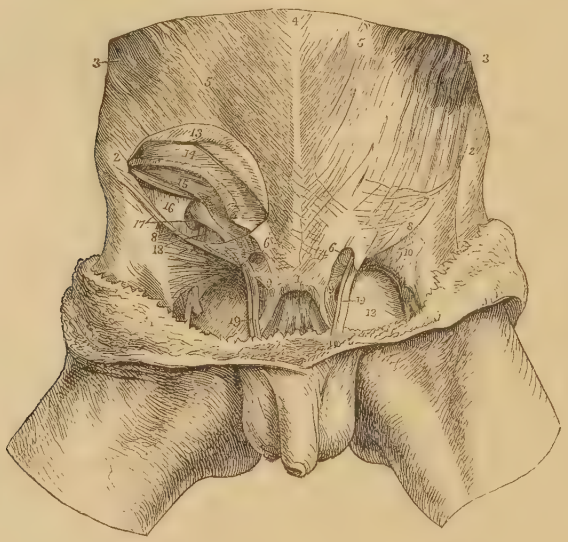
delicate, yet rapid, powerful, yet enduring, often instinctive, and, as it were, without our thought or cognizance, yet are all these muscles voluntary, and wonderfully capable of education and improvement, so as to become, not only the principal agents in most of the physical acts of life, defensive or offensive, but also the immediate instrument in the production of every work of art, thereby, in a great measure, portraying the feelings of the mind, and the powers of the intellect. The large supply of blood-vessels and nerves, imparting the highest sensibility, and the most exquisite delicacy of tact and feeling, and these properties, too, residing in a part necessarily, and almost constantly, exposed to violence or injury; these, and many other circumstances connected with the organization and the functions of the hand, are eminently calculated to excite our curiosity, and, when fully and properly investigated, cannot fail to ensure admiration and respect."



Dr. Harrison's description of the surgical anatomy of inguinal and femoral hernia is the most lucid and complete that we have ever met with. As its length prevents our entering fully into its details, we select that portion of it which treats of direct inguinal hernia, to shew the manner in which the author draws sound practical inferences from anatomical facts:

"*Direct, or ventro-inguinal hernia*, protrudes directly through the external ring, without descending along the spermatic channel. The occurrence of this species is in a great degree guarded against by the fascia transversalis, and by the expansion of the tendon of the transverse muscle, also by the conjoined tendons which lie immediately behind the external ring; the contracted form of the base of this opening, together with the intercolumnar fascia, the edge of the rectus, the triangular ligament, and the spermatic cord, may be all enumerated as additional protections to this part of the abdomen. In this species of hernia, the sac will be found covered by the integuments, superficial and intercolumnar fasciæ, also by an aponeurosis derived from the conjoined tendons, and from the fascia transversalis, which the tumour has pushed before it, though in some instances

the latter has been found to have burst through these structures; the sac will be also covered by the usual cellular capsule; it is not covered by the cremaster, and in general it descends along the inner and anterior side of the cord, that is, the cord will be found external and inferior or posterior to it, but in some few cases the cord has been found passing across the neck of the sac, that is, anterior to it; the sac is seldom or never, however, found between the cremaster muscle and the spermatic vessels, except occasionally, in one particular form, of which I shall speak directly. The epigastric vessels lie to the iliac, or outer side of the neck of the sac; in dividing the latter, therefore, in case this operation be required during life, the

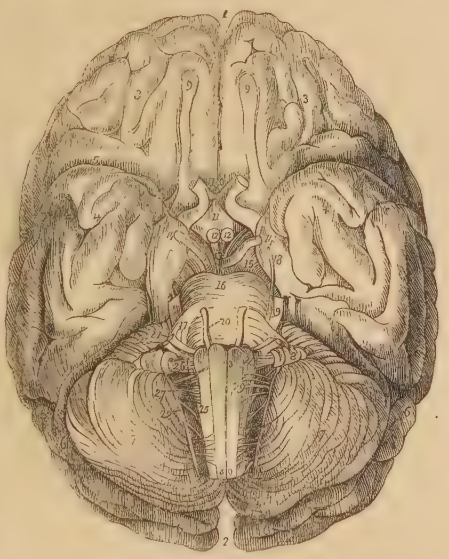


edge of the knife should be directed upwards, or upwards and inwards. It is safer, as a general rule, to divide the stricture directly upwards in all forms of inguinal hernia, because it is often extremely difficult, and in some cases even impossible, to determine, during an operation, the exact species of the disease; thus when an oblique inguinal hernia has continued for a considerable length of time, the spermatic canal will be found altered in many respects from its natural condition; it will have become dilated and shortened, and the abdominal rings expanded and approximated, so as to render it difficult to distinguish it from a direct inguinal hernia; and again, the direct hernia sometimes protrudes more externally, that is, close to the pubic side of the epigastric vein and artery, in which case the tumour may be delayed for some time in the canal, and must descend with some obliquity to reach the external ring."

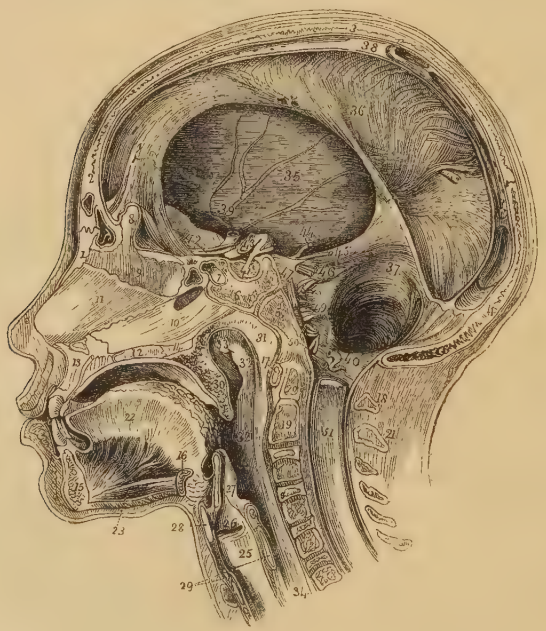
A considerable portion of the second volume is occupied by the chapters on the anatomy of the nervous system. This is by far the most important and highly-finished section of the work, and bears evident marks of long anatomical experience, deep thought, and laborious research. To those who are imbued with the doctrines of phrenology we strongly recommend a careful perusal of Dr. Harrison's arguments on this subject.

After having accurately described the general and distinctive characters of the convolutions in man, and in some of the lower animals, he observes:

"A section of either hemisphere clearly displays this convoluted and involuted arrangement of the vesicular or grey neurine, the mechanical effect of which must be threefold: first, to increase the superficial extent of the vesicular or grey lamina; second, to extend that of the pia mater, or vascular nutrient tissue, in the same degree; and third, to enable a greater quantity and number of white or conducting fibres to come in contact with the vesicular matter than could possibly be the case, if the latter, in the confined area of the skull, presented one smooth, uniform expansion, as is the case in the more simple brain of the inferior animals. The physiological design of this formation is a problem still involved in mystery; different opinions are entertained respecting it; some maintain that as the grey neurine is the most highly organized portion of the nervous system, it is the most influential in the function of innervation—that it is, in fact, the principal dynamic agent in this function, and that the greater the extent of this substance, *cæteris paribus*, the greater will be the capability of manifesting nervous power. Now this convoluted arrangement of this material has the obvious effect of collecting into a small space a great superficial extent, whereby the greatest possible number of white fibres are brought into contact and communication with it. Others who maintain the analogy between the phenomena of electricity and those of the nervous system, consider that, as the electric force is proportioned, not to the quantity of the



mass concerned in its production, but rather to the extent of its surface, so the energy of nervous action will be in proportion to the superficial extent of the grey or dynamic neurine, and to the number of connecting points between it and the white, or the conducting fibres. It is very generally believed, and certainly with great reason, that, as the convolutions and the hemispheres are more highly developed in man than in any other animal, his mental and intellectual superiority is connected with their existence; that, in fact, the convoluted surface of cerebral grey neurine is the seat of intellectual action. This opinion is confirmed by comparative anatomy, by contrasting this surface in the male and female, in the child, in the adult, and, again, in the very aged, and in different persons whose intellectual powers had been known, and could have been compared during life; also in the idiot, the lunatic, or diseased; also by observing that inflammation of the surface, or of its vascular membrane, disturbs all mental operations, and even induces delirium. This opinion is carried still further by the phrenological school, whose supporters insist on two distinct propositions: first, that there exists a plurality of mental functions, or certain distinct fundamental faculties, moral feelings, and propensities; and secondly, that the



cerebral convolutions are the organs or material instruments by which those functions are performed; and they accordingly mark upon the skull numbers corresponding to certain convolutions or

mental organs within. The first proposition is purely metaphysical, and may or may not be true; its consideration does not fall within our province: the second rests not merely on the universally admitted opinion, that the convoluted surface is the seat of intellectual operation, but mainly on the frequently observed and very remarkable coincidences between certain high mental manifestations, and great development of the corresponding convolutions. To this theory it has been objected, first, that not only is the grey neurine one continuous and unbroken surface, without any structural distinction or division between its various eminences and depressions, but the white fibres also appear combined into one uniform mass; secondly, that several convolutions are not recognised, though in point of size, and uniformity of existence, they would appear superior to those which have been stamped with numbers, for example, the 'ourlet,' the 'Sylvian,' the convolutions of Reil, and many at the base; thirdly, that the apparent fulness or obvious prominence of some eminences may depend, not on any superior development in them, but rather on a protrusion of others which are contiguous or deeper seated; thus a highly developed 'ourlet' might account for an elevation of the vertical and parietal convolutions, &c., &c.; fourthly, no precise function can be assigned to the involuted or depressed convolutions; whereas, if the dynamic power of the whole organ, or of individual portions, be in a ratio to the superficies of the grey lamina, then this series of involutions, or depressed convolutions, must be equal in function and importance to the convex eminences, inasmuch as the combined areæ of the former exceed that of the latter. Neither are convolutions and involutions always in the same ratio; the latter may be deep, and even expanded below, when the convolutions are by no means prominent, and *vice versâ*. Therefore, mere inspection of the convex surface of the cerebrum cannot enable us to judge of the superficial extent of the grey or vesicular lamina. We may see a large brain, with full and well-developed convolutions, but with shallow involutions; and, on the other hand, we may see a small brain, with moderately developed convolutions, but deeply prolonged involutions; in the latter case we shall probably have an equal extent of superficial area of vesicular neurine, and therefore, an equally dynamic organ and energetic brain as in the former, all other conditions as to temperament, health, &c., being supposed equal. Fifthly, in the fully formed skull, the internal surface of the bones is marked by depressions which correspond to the convolutions, and by intervening ridges or prominences corresponding to the sulci; so that from an internal mould of the cranium a very accurate representation of all the surface of the cerebrum may be taken, except the inferior portion of the occipital lobes which rest on the tentorium. At the base of the cranium the bony ridges are more prominent, but in the superior regions the depressions are more developed, and the intervening lines are softer and less projecting. On account of the frontal sinuses, and of the diploe, the external surface of the skull does not by any

means exactly represent the internal, but is more smooth and even, and never accurately presents eminences and depressions inversely corresponding to those within. To some extent, however, and only to some, does the external surface of the bones indicate the projections on the surface of the brain; when a certain portion of the latter, or a certain group of convolutions, are very prominent, the skull in that region will be prominent also, and *vice versâ;* but we very seldom find distinct external elevations corresponding to individual convolutions."

The organs of the senses, being the instruments or media whereby man obtains all his knowledge of the physical characters, and of the general and particular properties of surrounding objects, have received a degree of attention proportionate to their importance in the human economy. To the chapters on the Skin, the Ear, and the Eye, we would particularly direct the notice of the reader, as those in which the author has been most successful in condensing into a small space the greatest amount of information on the descriptive anatomy, structure, and physiology of each respective organ.

Under the head of the anatomy of the eye are included the descriptions of the globe or visual instrument; of the orbits, supercilia, palpebræ, cilia, conjunctiva, lachrymal apparatus, orbital muscles, nerves, and vessels.

A careful analysis of the actions of the orbital muscles in producing the varied motions of the eye-ball, and a correct description of the *ocular fascia*, or *tunica vaginalis oculi*, will be found amongst the most useful additions to this article.

It is unnecessary for us to go further into the merits of the volumes before us; the passages we have cited are sufficient to prove that the author's aim is not only to present an exact and minute description of the various components of the human body, but also, and chiefly, to elevate and enlarge the views of the student, by leading him to extend the range of his anatomical pursuits beyond the mere mechanical art of dissection.

In preparing the present edition of the Dublin Dissector

for publication, Dr. Harrison has conferred no ordinary boon on the junior members of the profession. The great number and variety of the subjects elucidated,—comprising the most important details in human anatomy, physiology, and pathology,—the practical excellence of its arrangement; the accuracy of its descriptions and illustrations; and the clearness and conciseness of its style, place it far above all other competitors in its own peculiar department. On comparing it with works of similar object, which have, of late years, issued from the Press of Great Britain and America,—some of which are of great merit, and beautifully illustrated,—we have no hesitation in recording our opinion that, as a faithful guide to the pupil in the dissecting-room, as well as an admirable system of anatomy for reference in the study, it has no rival in any language.

In the preface the author acknowledges his obligations to his demonstrators, Drs. Hatchell and King; and in particular to Dr. John Hill, for his "selection, arrangement, and descriptions of the wood-cuts."

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1. *Copy of Reports on Sir William Burnett's Disinfecting Fluid.* (Ordered by the House of Commons to be printed, 20th July, 1847).
2. *Sir William Burnett's Patent for the Preservation of Timber, Canvas, Cordage, Cotton, Woollen, &c., from Dry Rot, Mildew, Moth, and Decay.* April, 1847. pp. 43.
3. *Observations on Professor Calvert's Letter on Chloride of Zinc as a Disinfecting Agent.* By WILLIAM GLASS, Associate of the Chemical Society of London.

A FEW days after we wrote the notice in our last Number of Messrs. Ledoyen and Calvert's delusive production, "printed by order of the House of Commons," we happened to meet with the first of the pamphlets at the head of this article. Notwithstanding the known character of Sir William Burnett, we were led to fear that something had happened. It is a suspicious thing for even the best of men to be seen contending with a notorious character; there is an old adage respecting the impropriety of fighting with a sweep, and we dreaded that Sir William Burnett had got into a predicament equally infelicitous. Upon a careful examination of the document, however, we found cause to lead us to a more correct appreciation of Sir William Burnett's conduct; and after reading over the other pamphlets on the subject, we were drawn to the conclu-

sion that any collision which may have occurred between him, on the one hand, and Calvert and Co. on the other, was simply defensive on his part. Moreover, we feel that Sir William has really made a discovery of very great importance in the arts; and it is to this part of the subject that we shall draw the attention of our readers.

Many antiseptic agents have been proposed from time to time, for the purpose of preserving animal and vegetable substances from putrefaction, or, what comes to the same thing, from parasites; for it is notorious, that the greater number of insects and fungi will only incubate or germinate on organic matter in a state of decay. The employment of these agents has, for the most part, been abandoned after a time, in consequence of their possessing some property or other which renders their use objectionable. Thus wood impregnated with corrosive sublimate is known to resist the growth of the fungus which occasions dry rot, but the deleterious influence of the vapour of this poison on the health of those exposed to it, soon caused this substance to be abandoned. Other metallic salts have been used for a like purpose, such as sulphate of iron, alum, &c.; but these salts, being crystallizable, are apt to effloresce on the surface of the wood or other material impregnated with them, and this circumstance renders their employment objectionable in many cases. Chlorine, if condensed into the interstices of a porous organic substance, is apt by its chemical action to produce an injurious alteration in the chemical composition of the material; and it, as well as most of the other agents alluded to, if used for the preservation of subjects for dissection, corrode the knives and other metallic instruments employed.

Now, Sir William Burnett has discovered that chloride of zinc is as powerfully antiseptic, if not more so, than any of the agents enumerated, while it does not possess any of their disadvantages. It does not produce any poisonous vapours, like corrosive sublimate; being deliquescent, and with difficulty crystallizable, it is not apt to effloresce on the surfaces of bodies imbued with it, like the more crystallizable salts; and it does not corrode metallic substances. As an antiseptic, it would, therefore, appear to be superior to all other known agents. We shall produce some of the evidence in favour of the foregoing facts. Professor Graham, of University College, says:

"The wood appears to be fully and deeply penetrated by the metallic salt: I have found it in the centre of a large prepared paving block. The salt, although very soluble, does not leave the wood

easily when exposed to the weather, or buried in dry or damp earth. It does not come to the surface of the wood by efflorescence like the crystallizable salts. I have no doubt, indeed, that the greater part of the salt will remain in the wood for years, when employed for railway sleepers or such purposes. This may be of material consequence when the wood is exposed to the attacks of insects, such as the white ant in India, which, I believe, would be repelled by the poisonous salt. After being long macerated in cold water, *or even in boiled water*, thin chips of the prepared wood *retain a sensible quantity of the oxide of zinc;* which I confirmed by Mr. Toplis's test, and observing that the wood can be permanently dyed from being charged with a metallic mordant."

The following is an extract from a report by M. Mangin, an officer of Engineers, who was commissioned by the French Government to examine the merits of Sir William Burnett's invention:

"This process consists in introducing into the wood, by means of great pressure, a solution of chloride of zinc, and in replacing as much as possible the sap by this solution. . . . .

"I have seen some slender plank and some pieces of canvas, which, after having been submitted to the preparation, had been placed during many months upon the soil of a very damp pit, by the side of others of the same dimensions, obtained from the same plank, and some other pieces of canvas cut from the same piece, which had not been prepared. The first were perfectly sound; the second shewed evident traces of deterioration. Some parts were even completely rotten. The intimate contact of a rotten piece has not any effect upon the prepared piece, as has been proved to me by the result of an experiment to this effect, by the principal surgeon of the arsenal at Portsmouth."

The resistance to dry rot exhibited by wood prepared according to Sir William Burnett's process is very remarkable. Thus, at Haslar Hospital, the wood of a water-closet became attacked with dry rot; Mr. Baker, the Inspector of Works, ordered it to be replaced partly by ordinary wood, and partly by wood impregnated with chloride of zinc; this occurred in 1836, and, in 1843, he reports that all the former had become rotten, while the latter was as sound as at first.

In another experiment, made in the cellar of a house in Chatham dock-yard (where the flooring had been repeatedly destroyed by dry rot, and where large fungi were then growing), a quantity of "Burnettized" deals were put down, together with other pieces of the same wood unprepared, in the latter part of the year 1838. When examined in the spring of the year 1842, all the unprepared wood had become com-

pletely rotten, whilst that which was "Burnettized" was perfectly sound and clean.

Besides incorruptibility, another advantage which results from Sir William Burnett's process is, that the wood becomes much less inflammable. The following is an official testimony to this property:

Sir,—My Lords Commissioners of the Admiralty having caused experiments to be made to test the incombustibility of woods, when saturated in your solution, I am commanded by their Lordships to acquaint you, that it has been ascertained that the soft woods, such as yellow pine and other deals, both foreign and English, saturated in solution prepared in certain proportions, when exposed to the immediate contact of iron heated to a blood-red heat, did not ignite into a flame, whereas unprepared wood of the same kind burst into flame immediately. The same effects, however, are not produced in the same degree by the same process upon the hard woods.

"I am, Sir, your most humble Servant,

"John Barrow.

"*Sir William Burnett, K. C. H.*"

In consequence of its being proved that soft woods become much less inflammable by being "Burnettized," the Lords of the Admiralty have directed the bulkheads in the holds and magazines of Her Majesty's ships to be fitted with timber so prepared; and Lord Stanley, when Secretary for the Colonies, recommended the local government at Quebec to avail itself of Sir William Burnett's discovery, in the application of the sum granted by Parliament for the relief of the sufferers by the extensive fires which occurred in that city in 1845.

A most important consequence of this discovery is, that soft timber of an inferior description can be made equal to the hardest and most seasoned. Thus, Mr. Bury, of Tullamore, in the King's County, finds that *domestic timber* (birch, elm, and Scotch fir), when "Burnettized," answers as well for the building and repair of canal boats, as the best *Memel timber*. Mr. Clarke, of Southamptonshire, used inch boards of elm, sawn up immediately upon being felled, for supporting the rich earth of a melon and cucumber bed. This bed was constructed upon what is called by gardeners the "Tank System," that is, the bed is kept warm by steam urged against the wooden bottom. Some of the boards were saturated with the chloride of zinc; the remainder were not. After being some months in action,

"The unprepared wood was permeated by the spawn of terrestrial fungi, which were growing on the under side; they had also given way in the centre, so much so as to endanger the slate-covered

tank beneath. The prepared boards were perfectly *straight*, sound, and unaltered."

The antiseptic effect of chloride of zinc, appears to be as well proved, as regards animal substances, as it is with wood, rope, and canvas. Mr. Bowman says, that, 'in preserving subjects for dissection,

"It preserves the colour and texture of the parts very admirably. It has the further very important advantage of not acting on the steel instruments employed, being, in this respect, equal to alcohol."

Mr. Sharpey alleges that,

"The liquor not only prevents the access of putrefaction, but corrects its effects, and arrests its further progress when employed after the process has commenced."

Mr. Partridge, of King's College, says:

"No body is now dissected at King's College, which has not been previously prepared by injecting your antiseptic into the arteries; and this preliminary proceeding is *not found to interfere* with the subsequent *success* of the ordinary *paint injection*, which should be thrown in on the following day. As the parts become exposed in the progress of dissection, it is useful to moisten them with a little of the solution by means of a soft sponge, and the hollow viscera should be *washed out* with the solution by the aid of a syringe. By these measures the different structures of the body are fully and distinctly preserved; the muscles, however, become paler, and, perhaps, a little more fragile than natural, but remain quite distinct."

These testimonials appear to be satisfactory. We have no personal knowledge of the result of trials made with the chloride of zinc in Dublin; but we understand that such have been made. We think those who have used it ought to publish their experience. Sir James Murray is the only witness from Dublin brought forward by Sir William Burnett, and the selection is certainly infelicitous. Without meaning the slightest disrespect to Sir James, we must acknowledge that the testimony of any lecturer on anatomy, demonstrator, or even student, would have more weight with us than his. His duties as Inspector of Anatomy do not, we should think, afford him the requisite opportunities for arriving at a satisfactory conclusion; and we should much prefer that the officers of the anatomical schools, in which he states the preserving liquor has been used under his inspection, should themselves come forward, than that we should be forced to receive their evidence at second hand.

The efficacy of chloride of zinc in destroying the offensive odour of bilge water in ships, is a fact now notorious. It is employed on board Her Majesty's yacht, Victoria and Albert, for this purpose, with the best results. The Eclair was sweetened by its means; and, in fact, it is now becoming extensively employed in the navy with this intention. The action is simply chemical; the hydrosulpheret of ammonia, which is the cause of the odour of bilge water, being decomposed by the chloride of zinc, with the formation of muriate of ammonia and sulphuret of zinc.

Having made discoveries of so great importance, we advise Sir William Burnett to remain contented, and not to permit himself to be drawn into a controversy which cannot terminate in either honour or profit. He has ascertained that the chloride is a powerful antiseptic, preserving wood, textile fabrics, and subjects for dissection, to a very surprising degree, without any of the inconveniences to which other antiseptics are liable; he has ascertained also that this salt renders porous organic bodies less inflammable; and that, moreover, soft green woods of domestic growth may be substituted, by its means, for expensive foreign timber. These are facts of very great consequence. Add to these, that chloride of zinc is capable of removing the disgusting odour of sulphuretted hydrogen, which is so apt to be liberated during the process of putrefaction, and we think that Sir William Burnett deserves the thanks not only of the navy, over whose medical department he has so long and so ably presided, but also of the nation. We do not quarrel with his having made his discoveries the subject of a patent; he was perfectly justified in acquiring a pecuniary interest in the profits of his own inventions. But let him avoid "*disinfecting*" night-soil, and the wards of hospitals; let him permit the potatoes to recover naturally without any curative manure; let him, in a word, carefully eschew Colonel Calvert's ways.

PART III.

REPORTS, RETROSPECTS, AND SCIENTIFIC INTELLIGENCE.

MEDICAL MISCELLANY.

A Case of Encephaloid Disease producing Amaurosis. By JOHN DALRYMPLE, F. R. C. S. E., Surgeon to the Royal Ophthalmic Hospital, Moorfields.

[Read before the Fellows of the Royal Medico-Chirurgical Society of London.]

IN laying before the profession a sketch of a very interesting case of cerebral amaurosis, I may be permitted to remark, that there are few diseases in which the diagnosis of remote causes is more difficult than in amaurosis, none in which the treatment, from the obscurity that often prevails as to the true nature of the lesion, is confessedly so unsatisfactory.

Amaurosis may depend upon a great variety of causes, and may arise from error of function, or from vice or lesion of structure.

Functional amaurosis sometimes occurs from the irritation of worms, sympathy with uterine disturbances, difficult dentition in infants, and even from carious teeth in adults. I have seen a case of nearly total blindness almost immediately removed by the expulsion of a tape-worm.

Exhaustion of the system from loss of blood, continued discharges of whatever kind,—in fact, the anæmial condition,—either deficiency in quantity or defect in the quality of the blood, may produce entire loss of sight. In a degree this is seen when a person is bled to syncope, dimness and even total darkness preceding the fainting. I have now under my care a young girl in whom complete amaurosis arose from the exhaustion succeeding hypercatharsis. In this instance all the external marks of the functional disease were present,—the dilated and motionless pupil, the glassy and uncertain stare, the bloodless and lustrous eye,—the very type of perfect amaurosis. It commenced in jaundice, was over-treated, and resulted in blindness in about six weeks.

In this form of the disease the simple absence of blood necessary to the maintenance of the functions of all our organs, sufficed to extinguish the sensibility of the delicate retina.

On the other hand, congestive amaurosis, amongst the most common examples of impaired vision, preceded by a totally different train of symptoms, may exist equally in persons of weak fibre and deficient heart's action, as in the strong, plethoric, over-excited state of the system.

Both the anæmial and congestive or hyperæmic amaurosis may, under prosperous circumstances, be cured without any organic change or structural lesion resulting.

Blindness may, however, depend upon structural diseases within the eye,—upon causes within the orbit, but external to the globe, —or from lesions within the cranial cavity. Where the amaurosis depends upon disease within the eye, it may be said to be consecutive rather than original,—the result of inflammatory action, acute or chronic. Thus retinitis, choroiditis, or the extension of iritis to the posterior tissues, are amongst the most common causes of ocular amaurosis; but in these cases the diagnosis is comparatively simple, from evidence of pre-existing inflammatory action being almost always to be recognised.

Blindness from causes operating within the orbit, but exterior to the globe, results usually from some pressure upon the eye or optic nerve, as from chronic abscess in the cellular tissue, periostitis, tumour,—malignant or otherwise,—or extensive effusions of blood, the result of direct injury. In these cases also, from a protrusion or misdirection of the eye, and a variety of other physical signs, the diagnosis is readily made.

The same facility in recognising causes does not exist in cerebral amaurosis, for while sometimes paralytic symptoms, strabismus, loss of sensibility of the skin of the face, hemiplegia, and the like, may indicate disease of the brain, the true nature of such malady is often most difficult to discover. It is frequently by subjective symptoms alone we can arrive at the truth; the eye itself may be healthy, and the iris often not even paralysed; I have frequently seen complete amaurosis in both eyes, with undilated pupils, with pupils even contracting upon exposure to light, though these cases are comparatively rare. Nevertheless, there are often cases of entire blindness with almost total absence of symptoms, cerebral as well as ocular, and I need not say such are peculiarly embarrassing, as well as nearly always hopeless.

The absence of subjective as well as objective symptoms leads to the suspicion of cerebral mischief. In the anæmial or hyperæmial amaurosis, general signs sufficient to direct our practice manifest themselves. Ocular blindness exhibits evidence of present or foregone structural lesion; but the greater obscurity of the different forms of disease of the brain, inducing amaurosis, necessitate the closest scrutiny in order to arrive at an even moderately precise diagnosis.

In those cases where the blindness depends upon causes altoge-

ther external to the cranial cavity, we may find, upon inquiry, that the patient sees *objects in his dreams.* So vivid and so real are the appearances presented to his mind's eye in his sleep, that waking to entire darkness is an additional source of distress to him. In such a case the parts of the brain which preside over the functions of vision,—the organs where the impressions on the retina, conveyed by the optic nerves brain-ward, *become perceptions*,—would be in a still healthy condition; for it is scarcely probable, that, if disease involved the corpora quadrigemina and geniculata, this exercise of their functions, deceptive though it be, would or could take place. We, therefore, should be led to infer, that if the amaurotic patient was found to complain of these vivid phantoms in his sleep, at least the central organs of vision were impaired, or that, if cerebral disease existed at all, it would be found to be some growth or pressure at the base of the brain, influencing the optic tracts or the chiasma itself. At best, however, I must admit this to be a rather speculative idea, which has not been traced in a sufficient number of cases to lead to any certain conclusion.

The case I propose to relate exposes such extensive disease of the brain, and was attended with so few of what are called cerebral symptoms, as to prove what I have already said of the extreme obscurity of the diagnosis, and hence a corresponding vagueness in determining the methods of treatment.

Case of Encephaloid Disease of the Brain inducing Amaurosis.—Miss B., a lady of colour, born in the East Indies, consulted me first in September, 1843, on account of nearly complete amaurosis in both eyes. Her age at that time was about 24.

The following is a short and imperfect history of her case:—About three years previously (in 1840) she had an attack of measles, the symptoms of which appear to have been very grave, for it was attended with signs of cerebral inflammation, delirium, strabismus, and dimness of vision. Her recovery was slow, though, at length, apparently complete. Her present blindness, therefore, she only dates from about nine months previous to her consulting me. She described it as commencing with dimness, rapidly increasing within the last three months up to the present time, when there is scarcely more than a perception of dark objects between her and the light. The pupils in either eye are not more than semi-dilated, and shew a slight greyish tint; the irides, though not motionless, are extremely sluggish; the vision of the left eye is extinct, but its iris acts in accordance with the right one, when exposed to extreme variations of light and shade. The axes of the two eyes do not correspond, and the left one has a slight external direction, not positively strabismus divergens, but giving a peculiar expression to the countenance.

The globes are slightly prominent, and, though at a first glance one would perceive that the patient was blind, yet, owing to the little dilatation of the pupils, there is not that glassy amaurotic stare so remarkable in the generality of persons labouring under cerebral blindness. There are no traces of congestion of the globes,

or of precedent inflammatory action of the internal tunics of the eye.

There is little general headach, but frequent neuralgia of the occipital nerves, which appears to be paroxysmal; but in the intervals of severe pain there is more or less dull aching at the back part of the head. The more acute suffering is attended with nausea, occasional sickness, and faintness.

Miss B. complains also of spasms of the muscles, and partial numbness of the skin of the right side of the face: also of occasional jerking of the muscles of the right arm. She can lie with the head low, and thinks the neuralgic pains alleviated by that position; is giddy on first rising; sees worse for the first half-hour on getting up in the morning, better subsequently, but worse again whenever fatigued or depressed.

The circulation is very feeble; the heart palpitates on slight exertion; pulse low, quick, but regular; the catamenia appear every three weeks: she suffers somewhat from dyspepsia.

This case has been under treatment for several months; and the view that appears to have been generally taken of it is, that it is a form of hysterical amaurosis, more or less connected with an anæmial condition, and uterine disturbance.

I first saw this lady at the request of Dr. M. Hall, whose opinion coincided with my own, that the amaurosis depended upon some organic lesion of the brain,—led to this conclusion by the obscure paralytic symptoms, the numbness of the face, the muscular spasms, the neuralgic pains, and persistent headach, always referred to the same region.

It is desirable to remark in the history of this case, especially in connexion with some parts of the subsequent treatment to which Miss B. submitted herself, that she was a person of strong good sense, placid disposition, and little disposed to purely nervous or hysterical exhibitions. She never evinced impatience or irritability, and bore her misfortune with singular fortitude and composure.

Acting upon the presumption that there might have been some chronic inflammatory action at the base of the brain, traceable to the meningeal inflammation, delirium, &c., which accompanied the attack of measles three years previously, it was advised that Miss B. should be put upon a mild but sustained mercurial course, with the most guarded attention to dietetics and general hygienic rules.

Shortly after commencing this plan, she went into the country, and there followed out her treatment; but, whether from accidental causes, or peculiarity of constitution, the mercurial action was rapidly set up and ran into severe salivation, whereby she was considerably reduced in power, and returned to town after several weeks, with her vision, if possible, in a worse condition than before.

Nevertheless, the more grave cerebral symptoms had disappeared; she had wholly lost the neuralgic pains and muscular spasms, and had recovered the sensibility of the skin of the face, while the feeling of sickness and nausea had, in a great measure, left her.

It would be uninteresting, and without instruction, to detail treatment carried over a term of nearly four years, with little influence on the disease. I will, therefore, merely sketch the further history of this case.

After her recovery from the effects of the first mercurial course, she persevered in the use of alterative doses of the mineral for some months, sustained by gentle tonics, and relieved from occasional attacks of increased cerebral congestion, by the application of leeches, or small cuppings from time to time. The amaurosis was soon perceived to be irremediable ; and, her general health being much restored, systematic medicinal treatment was at length abandoned.

By the advice of friends, however, Miss B. occasionally consulted other physicians, and had various opinions offered to her, as to the causes and nature of her malady. At one time she was informed that the blindness depended upon the non-evolution of the two upper wisdom teeth, she was advised to consult a dentist, and have the two wanting teeth sought for, cut down upon, and extracted from the alveoli, where they were possibly concealed.

For some weeks she was under mesmeric treatment, without, I need not add, any benefit, but without her experiencing any of those occasional phenomena exhibited in persons of nervous temperament, excitable imagination, or weak reasoning faculties. Probably her blindness itself saved her from any exhibition that might have encouraged a persistence in this delusive treatment.

In the early part of 1846 Miss B. had a recurrence of the faintness, as she expressed herself, which came on nearly every day at irregular periods, and had some resemblance to an epileptic aura. She would complain of creeping sensations ascending towards the pit of the stomach, attended with a sense of faintness, and would probably have fallen, had she not, on first perceiving the approach of the fit, laid herself down on the sofa. If seized while walking, she would stop and rest upon the attendant's arm, for a few minutes, until the feeling passed away. Sometimes these attacks would occur in bed, at other times, when at table at meals; but they seldom lasted above a few minutes, and left her little the worse for the seizure. On one occasion she appears to have lost her consciousness entirely, while at Dr. Hall's house; but this was, in all probability, a real syncope produced by fatigue in walking. Towards the middle of last year Miss B. suffered somewhat more from headach, still referred to the back of the head, and more or less to the right side, behind the ear.

About the first week in February, 1847, this lady complained of being more than usually unwell, but attributed her discomfort to a bilious attack, for which she took a mercurial aperient, but was not sufficiently ill to excite uneasiness. On Sunday, the 7th of February, she was up, and cheerful as usual, but at night was restless and uneasy, although it appears she passed the night without complaint. On the morning of the 8th she did not rise to breakfast, and appeared somewhat unconscious of what was passing; still she answered questions correctly, and partook of some breakfast as usual. About

10 o'clock, A. M., her attendant observed her to become more faint, and, being alarmed, sent for her usual medical friend. Probably scarcely twenty minutes had elapsed before he arrived, but Miss B. was already dead. No convulsion had occurred, no sound escaped her; in fact, the actual moment of dissolution was not observed, so tranquilly had she passed away.

During the greater part of the time this lady was under treatment, she resided in the house of a medical friend, Mr. Burford, of Hamilton-terrace, St. John's Wood. She was seen many times by Dr. M. Hall and myself; and if I have been concise as to the different medicines employed, or course of treatment that had been recommended, it is because nothing availed to arrest the progress of the formidable disease which the *post mortem* examination revealed to us. It is, however, not too much to say, that life had been prolonged, and incidental suffering greatly alleviated and prevented, by the unremitting care and attention paid to all parts of the treatment by Mr. Burford, and by the opportune arrest of occasional disturbance of the cerebral circulation, which her residence in the house of a medical gentleman so fortunately permitted.

Twenty-six hours after death an examination of the head took place, in the presence of Dr. Marshall Hall, Mr. Burford, and myself.

It was observed that the scalp over the occipital region was unusually thick, condensed, and congested. The calvarium was normal in all respects; and on its removal the dura mater presented no morbid appearances. There was little congestion of the pia mater, and the arachnoid of the superior surface of the brain was transparent and healthy. The convolutions of the upper and middle part of the right hemisphere *were flattened.* On making the usual sections to expose the lateral ventricles, it was observed on the right side, that a considerable bulging of the white matter took place, leading to the impression that the cavities would be opened unusually early, from being distended with fluid. On a puncture being made, about an ounce and a half of clear serum escaped from the anterior horn of the right lateral ventricle, and upon splitting up its roof, it appeared as if the serous fluid had been contained in an isolated cavity, in which was seen the prominent anterior extremity of the corpus striatum. Immediately behind the anterior third of this ventricle, its cavity was nearly closed by the pressure of a tumour exterior to its walls, deeply situated in the white matter of the middle lobe of the right hemisphere. Behind this point again, the posterior cornu was dilated and contained fluid. The plexus choroidis passed down the descending cornu, but its walls were pressed so closely together by the tumour, that a probe could scarcely be insinuated between. The septum of the ventricles on this side was greatly thickened, and under its serous covering a deposit of soft fungoid matter was perceived.

The left ventricle, as well, indeed, as the whole of this left hemisphere, was normal.

The brain was now removed, and placed with its base upwards.

The first point that struck our attention was a large, reddish, pulpy tumour, that extended from the junction of the optic nerves, to the pons Varolii, overlapping to a slight extent, on the right side, this transverse band of white matter.

The optic nerves were, at their section within the cranium, diminished nearly one-half in size, of a greyish yellow colour, soft and homogeneous, the fine white medullary tubules having vanished. The chiasma was partially involved in the tumour, but the left nerve quickly emerged from it, and could be followed through the optic tract to its termination in the corpora geniculata, corpora quadrigemina, and thalamus, distinguished throughout its course round the left crus cerebri by its yellow grey colour, very unlike the healthy appearance of this nerve. The third, fourth, fifth, and other nerves on *this side* were not implicated. *On the right side* the optic nerve ceased to be traceable brainwards, immediately posterior to the chiasma. The soft, red, fungoid tumour covered the right crus, and passed at once deeply into the substance of the middle lobe of the brain. The third pair of nerves slightly diminished in size, but presenting its usual fibrillated appearance, emerged through the centre of the fungoid mass, imbedded in a little sulcus, and separated by a fine transparent tissue from the tumour itself. Posteriorly the tumour overlapped, slightly, the pons Varolii, and partially the emergence of the fifth pair of nerves on the right side. The sixth pair of nerves, on both sides, were unaffected, and passed under the tumour and free from it. The basilar artery was covered by the growth, but could be separated from it, by raising a fine membraneous tissue. The tumour itself was freely supplied with vessels from all points of the circle of Willis.

The pons Varolii, crura cerebelli, and all the nerves originating from the medulla oblongata and cerebellum itself, were healthy.

The fungoid mass at the base was placed principally to the right side of the mesial line, but partially overlapped the left crus cerebri, and entirely concealed the pons perforata, the mammillary bodies, and infundibulum. Exteriorly it passed at once into the inferior portion of the middle lobe on the right side of the brain; then, ascending on the outside of the descending cornu of the ventricle, it embedded itself in the centre of the medullary mass of this hemisphere, compressing the middle of the lateral ventricle, and involving the optic thalamus.

On a section being made through the tumour, its limits were pretty clearly defined by its reddish colour, from the surrounding white matter, and its size equalled that of a hen's egg. Its general aspect, pulpy texture, and the examination subsequently by the microscope, clearly indicated its character as encephaloid fungus, or fungus hæmatodes.

One eye only was minutely examined. There did not appear to be the slightest disease of the intraocular tissues. The retina was as perfect as that of the most healthy organ; not in any degree degenerated, although the optic nerve, from the eye to the optic foramen

of the frontal bone, was sensibly diminished in size, though not altered in colour or character, as were the nerves within the cranium.

Such cases as the one above related, although they teach little, are interesting in proportion as their diagnosis is obscure. It will be observed that, considering the size of the tumour, and the extent of the brain it occupied, the symptoms usually connected with extensive cerebral disease were few and mild.

Complete amaurosis, as we well know, may depend upon an infinity of causes independent of tumour of the brain. The almost entire absence of paralytic symptoms, where so large a portion of cerebral substance was displaced for the lodgment of the tumour, or which had become so far degenerated as to be inadequate to the discharge of its functions (while even a small hæmorrhagic clot in the same position, would, in all probability, have produced hemiplegia), can only be accounted for on the presumption that, from the slow growth of the tumour, the still healthy left side of the brain became accustomed and competent to the discharge of all the duties of volition. All the nerves of special sense, having their separate and isolated centres of communication, had, with the exception of the optic, escaped the contamination of the disease; while the partial numbness of the face, and the occasional muscular spasms, which were arrested and even removed by the mercurial course, led to the belief, that the symptoms had depended, at the earlier periods of the disease, upon chronic inflammation of the membranes, and consequent effusion at the base of the brain.

It may be a question, and not an uninteresting one, whether the first germs of this malignant disease were set up at the period of the attack of measles, accompanied as it was with delirium, strabismus, and dimness of vision;—whether a chronic meningeal inflammation, with subarachnoideal effusion, of an albuminous or more solid nature, subsequently organized and degenerated into malignant disease, had not already taken place at the period when Miss B. first came under my observation. The relief of many pressing symptoms, the recovery of the sensibility of the skin, the abatement of pain, and the absence of muscular spasm, after the salivation, favour the belief that the results of ordinary inflammation yielded to the influence of the mineral; while the depression of the general power, due to the same cause, and probably an alteration of the normal nutrition of the already diseased structures, may have led to or favoured the growth and progress of the more malignant and ultimately fatal malady.

This case, though by no means a rare one, is, I have felt, sufficiently interesting to place upon record, and as such I submit it to the consideration of the readers of the Dublin Quarterly Journal.

Case of Extirpation of the Superior Maxilla, for Fibro-Cartilaginous Tumour in the Antrum Maxillare. By Edward L. Falloon, M. R. C. S., Liverpool, late Assistant-Surgeon to the Bengal Volunteers, China Expedition.

The subject of this operation, Sarah Humphreys, aged 28, from Holywell, Flintshire, states that, four years ago, a small tumour, not larger than a pea, made its appearance on the right cheek, unproduced by any known cause, and unconnected with toothache or decayed stumps; it grew slowly for the first two years, causing hardly any pain, when she applied for advice to some medical men in her own neighbourhood, who extracted a bicuspis and a molar tooth, puncturing the tumour externally at the upper part of the gum, when nothing but blood escaped; an attempt was then made to produce suppuration by poulticing, &c.; since which time it has increased rapidly, till it has attained its present size, viz., that of a large goose egg. It is of firm consistence, communicating at one point an elastic feel; the parietes of the antrum unbroken; skin sound, and not adherent to the tumour; no discharge from the corresponding nostril; no fungoid appearance in the mouth; it is not painful, except when handled; there is slight dilatation of the nostril; and no displacement of the eye, but slight impairment of vision in the

lateral direction(*a*). Some enlarged veins traverse the tumour; three teeth are moveable in its substance; two decayed and discoloured: the patient's constitution is unimpaired, and she enjoys excellent health, but, in consequence of the inconvenience and unsightliness of the tumour, and its rapid increase of late, she has firmly made up her

(*a*) I have to thank my young friend, Mr. Robert Batty, for the accompanying illustrations, the one taken a fortnight before, and the other a month after, the operation.

mind to undergo an operation for its removal. To this request I readily acceded, seeing that the growth was marked by all the characters that distinguish the benign from the malignant class of tumours. The 23rd of July was fixed for the operation, and I sent her to the country for the intervening fortnight, prescribing a quinine and iron mixture, as her countenance was rather chlorotic.

With the approval and in the presence of Mr. Bickersteth, and assisted by Mr. Lewis, I proceeded with the operation as follows. Some morphia was previously administered about 3 o'clock, P. M. She was placed in a strong arm-chair, with the head resting on the breast of an assistant, a second assistant standing at her right side to compress the carotid, if necessary. I commenced by extracting two incisors, and transfixing the integuments with a sharp-pointed bistoury, inserted from the inside ; and, piercing the skin high up over the most prominent part of the malar bone, an incision was made down to the commissure of the lips; a second incision, commencing below the inner canthus of the eye, was made downwards, dissecting the ala nasi from its subjacent bone, and dividing the lip in the mesial line. A flap was dissected quickly up, and the conjunctiva and inferior oblique raised from the orbital process; with Heys' saw, the perpendicular plate of the malar bone was then divided, and the horizontal portion, as far as the spheno-maxillary fissure, with Liston's bone forceps; then, grooving the palatine arch and preserving the soft palate, the bone was divided from its fellow by placing one claw of the forceps in the nostril, and the other in the groove ; in accomplishing which, the claw of the forceps gave way, and having no other at hand to replace them, the nasal process, as well as some bony attachments left undivided towards the spheno-maxillary fissure, had to be separated by the saw, thereby very much prolonging the operation, and the consequent sufferings of the patient. The tumour was then depressed, and required great force to detach it, two fingers supporting the palate-bone, so as to separate the superior maxilla at its suture; the external pterygoid and masseter muscles, and mucous membrane, being divided, the tumour dropped out, making a loud noise as it left the socket where it was imbedded under the orbit. The bleeding did not amount to more than a pint in all, although the operation lasted an hour, in consequence of the delay caused by the breaking of an apparently strong pair of forceps. Only one artery in the palatine arch required ligature. I need not attempt to describe the hideous chasm that now remained, for no surgeon can have much difficulty in forming a correct notion of it, when he reflects on what parts were removed. I put a dossil of wet lint into the cavity, and brought down the flap, securing the edges in apposition by four twisted and three interrupted sutures, strips of isinglass plaster, and a fold of wetted lint, over all. Another opiate was administered, and she was placed in bed, having borne the operation with great fortitude, neither her pulse nor her courage having flagged during the whole time.

The entire of the superior maxilla of the right side, and the greater part of the malar bone, were involved in the disease; the tumour was nearly globular, with a convexity at one end, surrounded in its whole extent by a pellicle of bone about the thickness of parchment; towards the inner aspect there was a distinct excrescence enclosed in a sac of its own, and on making a section through the centre of both, they were found to consist of a dense fibro-cartilaginous structure, with spiculæ of bone interspersed. Most of the original bone seems to have been absorbed, and a case made for the tumour by the deposition of new bone.

8, P. M., four hours after operation. No oozing of blood; pulse 100; slight heat of skin; complains of pain and thirst; but had upwards of an hour's sleep, and relished some cold bread and milk.

24th, 10, A. M. Had a good night's rest, feels refreshed, very little pain; pulse 98; tongue loaded. Ordered a purgative draught.

6, P. M. Œdema of the eye-lid, and swelling of the parts; thirst not so urgent; slept some during the day; bowels not moved; had a domestic enema: wetted lint, to be renewed frequently, applied on the cheek.

25th. Much relieved by having the bowels freely moved; passed a good night; some swelling, and painful distention of the jaw, which was much relieved by removing some of the lint from within; breath very fœtid. Line of incision healed by first intention over its whole extent.

26th. Slight irritative fever; pulse 110; dry tongue; thirst; pain. Removed more of the lint from within, permitting a free discharge of pus. Ordered a dose of calomel, James's Powder and muriate of morphia, and a chloride of soda wash for the mouth. Removed one of the pins to-day.

27th. Had a good night; tongue moist; pulse 98; wound suppurating freely. Removed the remaining pins and sutures, and applied strips of plaster; also some of the lint inside, but with much difficulty, it having caught on some spicula of bone. Œdema of eye and face gone; can open the former, and see perfectly; is in good spirits; allowed mutton broth.

28th. Improves daily; no pain or swelling; no falling down of the eye; tongue clean and moist; appetite good; bowels open: dresses herself and goes down stairs daily.

29th. Some œdema of lip at external angle, causing it to hang down, making the mouth crooked; a bandage applied over the head to support it: has perfect control over the orbicularis oris; profuse discharge kept up by some lint that still remains.

August 3rd. Goes on very satisfactorily; the remainder of the lint has been brought away with some difficulty; the discharge lessens daily: she has been out of doors, and feels so well as to be able to go to the country for a week.

11th. She presented herself alone to-day, looking well; wound outside perfectly healed; eye and mouth straight; no falling-in of the cheek; a strong band has formed from the commissure of the lip

that hung down, and attached itself to the ala nasi, so that there is hardly any deformity; the line of incision is very even, and scarcely perceptible; articulation wonderfully distinct.

19th. Greatly improved; surface inside granulating; the cavity filling up; voice improves; is stronger and better than she has been for a long time, and is much pleased with her present appearance.

The only remarks I have to make on this case, consist in a caution to practitioners undertaking this operation, to be provided with duplicates of every instrument required, for I shall never forget how awkward I felt when the strong bone forceps gave way.

Cases of Sea Scurvy. By J. Moore Neligan, M. D., Physician to Jervis-street Hospital, &c. Reported by Mr. R. W. Egan.

The men, a report of whose cases is appended, were part of the crew of the Russian barque Secundus, which sailed from Odessa April 22nd, and arrived in Dublin July 23rd, 1847.

No. 1.—Isaac Grönros, a native of Finland, of low stature but stout built, dark olive complexion, brown eyes and hair, with an expression good-humoured and lively, aged 25 years, was admitted into hospital 26th July, 1847. The disease manifested itself by the following symptoms: great pain and stiffness of the knee, ankle-joint, and hamstring tendons; his body was studded with livid purple spots, which, when pressed with the finger, communicated a sensation as if a small piece of cartilage were inserted beneath the skin; these were situated chiefly on the back and shoulders, as also on the instep and fore-part of both legs, which were of a coppery brown hue, painful on pressure, and covered with a thick, scaly coating, much resembling ichthyosis. The left leg appeared by comparison to have wasted considerably; his gums were swollen, spongy, and inclined to bleed. In other respects his general health appeared good. Subsequent to his admission, it was found that this man had been similarly affected on two previous occasions, but never before so severely as on the present.

On admission he was put on the full diet of the house: bread and milk for breakfast; twelve ounces boiled fresh beef, with its soup, and a fourth part of a half-quartern loaf, for dinner; and in addition one pound of potatoes, with one head of boiled cabbage, daily. This diet was continued during his treatment, save on the occasion of an attack of diarrhœa. He was ordered to take half a grain of oxalic acid, dissolved in water, with the addition of a little honey, every six hours.

July 27th. Complained much of the pain in his legs; directed to have them rubbed with soap liniment.

28th. Somewhat better. Oxalic acid to be continued. To have a warm bath to-night.

August 1st. Considerably improved; legs much less painful; the

scaly coating almost disappeared; purple spots much as before, but the coppery discoloration visibly fading.

2nd. Some lime-juice having been procured, the oxalic acid was omitted, and the following mixture substituted: lime-juice and treacle, of each, an ounce; water, eight ounces; an ounce to be taken three or four times a day.

3rd. Still improving; expressed himself to his captain as quite well; joints not so painful; he can now walk with comparative ease.

From the last date he continued to improve, with the exception of a smart attack of diarrhœa which lasted for three days, and was followed by copious bleeding from internal piles. On the 12th inst. he was quite well; his joints free from either pain or stiffness; the discoloration had also completely disappeared; the gums were firm and natural in appearance; and he was altogether in perfect health. He left the hospital to join his ship.

No. 2.—Bernard Sandberg, aged 26, dark complexion, black hair, and of rather a sinister expression of countenance, admitted the 26th of July, 1847. The symptoms of this case were of much the same character as the last described, except that articular pain and rigidity were not so great. It, however, presented another feature of the disease, viz., fungous ulcers growing from each leg; these growths were raised half an inch from the surface, covered with a dirty brown crust, and discharging a most fœtid sanies: in size they varied from that of a crown-piece to that of a shilling, and were exquisitely sensible. This man was put under the same treatment as the former.

30th. Ordered a carrot poultice to the ulcers on the legs.

August 1st. The crust has come away from the legs; the exposed surface is of a bright scarlet colour and honey-comb appearance.

2nd. To have the lime-juice mixture. A warm bath at bed-time.

4th. The discoloration on the legs and insteps is disappearing; the ulcers on the legs are looking healthy, and much diminished in size.

8th. The spots and discoloration before alluded to have quite disappeared; the gums are firm, and have not bled since a few days after admission; the ulcers continue to improve. A linseed cataplasm, wet with pure lime-juice, was ordered to be applied to them, and to be renewed three times daily.

12th. Discharged this day, in consequence of his ship being about to sail. He left hospital perfectly well, with the exception of the legs, which were not quite healed.

No. 3.—Esaïas Grönros, aged 20, admitted 24th July. When brought to the hospital he was prostrate in the last degree; no pulse perceptible at the wrist; heart's action hardly to be felt; his body in a wretched state of emaciation; legs and feet swollen and œdematous; countenance blanched; surface cold; respiration feeble, the left lung alone appearing to be filled, and no respiratory murmur to be heard in the right; the surface of the body and the mucous

membrane, wherever visible, were perfectly bloodless; and he had a short, dry cough.

It appears that this man had been ailing when the vessel left Odessa, and in the course of the voyage was obliged to be sent below, and on the arrival of the ship at Falmouth he was under medical treatment for eight or night days.

On admission, there were administered two ounces of wine, together with the usual treatment in cases of great prostration, and in a few hours he rallied somewhat. Next day he was put on the same regimen as his fellows, substituting, however, mutton for beef. His appetite, as indeed that of his companions, was absolutely ravenous.

31st. He was this day so far recovered as to warrant the adoption of medical treatment, when he was ordered the oxalic acid mixture, and the wine to be continued to the extent of eight ounces daily.

August 2nd. Rather improved, though still very low: to have in addition to the wine a pint of porter daily. He this day made signs as if his throat were sore, or that he had some difficulty in swallowing; the short cough continues, but there is no expectoration.

6th. To have the lime-juice mixture.

8th. Was attacked with diarrhœa, but not severely. Omit the porter; ordered rhubarb mixture with magnesia; wine to be mulled.

9th. Diarrhœa not abated. Ordered five grains of the storax pill at bed-time; lime-juice to be omitted.

From the last date he gradually sunk; and on the 11th he died at 8 o'clock, A. M.

Necropsy, twenty-four Hours after Death.—Extreme emaciation. Over the spaces between the second and fifth ribs of the right side there appeared a dark green discoloration, which extended quite through the intercostal muscles; the same appearance was observed on the peritonæal surface of the recti muscles; and these muscles were soft, and easily torn through, as if partially disorganized.

On opening the chest, the entire of the investing pleura of the right side was found adherent to the costal, the adhesions, when broken through, exposing an enormous abscess, which occupied the entire of the right thoracic cavity, and was filled with a thin, purulent fluid, of remarkably fœtid odour. Some idea may be formed of the extent of this "excavation," from the fact that it was capable of containing ninety-six ounces of fluid; its walls were formed of pulmonary tissue, evidently recognisable, though not in any place thicker than two lines. There was no bronchial tube opening into it, nor could any trace of a right bronchus, or any of its subdivisions, be discovered, further than at the very bifurcation of the trachea, where it stopped short suddenly, as if compressed by this enormous abscess, which thus occupied the entire right lung—the tissue of which appeared, as it were, to be unfolded, as the brain is sometimes unfolded in chronic hydrocephalus. The other lung was comparatively sound, if we except a few scattered tubercles in the upper lobe.

The abdomen was filled with a pale, straw-coloured fluid; the viscera healthy, except the liver, which was of a pale nutmeg colour, and slightly fatty.

The head was not examined.

I have thought that a report of these cases of true sea-scurvy,—so rare in the present day,—would not prove uninteresting to the profession at this period, when a disease of a nearly similar character has been recently so very generally prevalent throughout the British Islands, and which has been so admirably described by my lamented friend, Dr. Curran, in the last Number of this Journal. To his paper I am enabled to add, through the kindness of Professor Aldridge, an analysis of the blood in one of the cases there described, which afterwards came under my care, and also to compare it with the state of the blood in one of the cases of sea-scurvy.

The diet of these Russian sailors consisted of hard, salt junk, black (rye) bread, and dry peas, with rum grog for drink,—a diet which, I need scarcely say, would be the most likely to produce scurvy, more especially in the absence of any sort of fresh vegetable. Besides, in their unusually long voyage from Odessa to Falmouth, where they arrived ten days previously to their reaching Dublin harbour, they had been exposed to the greatest hardship, the weather being very stormy, and the ship short-handed(*a*).

The two first cases described are identical with many to be met with in Lind's treatise, and in Lord Anson's voyage. The colour of the skin, with the dry scurf on the legs, in the case of Isaac Grönros, and the ulcers, with the *bullock's-liver* fungus, in the case of Sandberg, are highly characteristic of Lind's observations at pages 108 and 115 of the second edition of his treatise, published in 1759.

The third case, that of Esaïas Grönros, requires to be noticed separately. He was in a dying state when admitted into hospital, and being unable to speak or understand a word of English, it was, of course, impossible to obtain any correct account of how long he was ill, or his previous symptoms(*b*). I afterwards learned from his captain, that he had been ill from the very day he sailed,—bloody diarrhœa, debility, and a short, dry cough, with stitches across his breast, being his chief symptoms; and also that he had a previous attack of scurvy. From the first it was remarked that the right side did not move during respiration, and no respiratory murmur, as stated in the report, could be heard there; but there was no bulging of the intercostal spaces, and after he rallied a little he could lie on either side; moreover, the heart was not in the least displaced. In the absence, then, of more positive signs, no diagnosis was made as to the

(*a*) The vessel was a barque of 220 tons burden, and there were but thirteen hands on board besides the captain; four of them were not much more than boys, being under eighteen years of age, and one of them, Esaïas Grönros, was sick from the time they left Constantinople.

(*b*) The captain was the only one of the crew who could speak our language, and even his knowledge of it was but very slight. I had, therefore, great difficulty in acquiring a history of the cases, and hence it is that the *signs* rather than the *symptoms* of the disease are reported.

presence of empyema, though it was suspected: I say, in the absence of more positive signs, for, owing to the extreme debility of the patient, and the agony caused even by percussion, the chest could not be very accurately examined. The general symptoms, besides, agreed so completely with several of Lind's and Anson's cases,—more especially the stitches in the chest, the difficulty of swallowing, the short, dry cough, the œdema of the limbs, the blanched state of the surface and of the gums, *and withal the good appetite*,—that I had no hesitation in treating the case as one of scurvy.

The abscess in the right lung, so well described by my clinical clerk, for extent, exceeds, I believe, any hitherto recorded. In the short space to which a report of this character is necessarily limited, it would be impossible to enter into a disquisition as to its probable cause or mode of formation. The quantity of fluid which it was capable of containing was accurately measured; and I had a cast made of the cavity, which exhibits its shape, size, and the character of its walls, and which is now in the Pathological Museum of the Dublin School of Medicine.

Professor Aldridge's analyses of the blood in the case of Sandberg, and also of the blood of a man named Clarke, who had been affected with the scurvy at that time so prevalent in the British Isles and in many parts of Europe, are appended; the symptoms of the disease in Clarke were well marked: fungoid and bleeding gums, pains in the limbs, stiffness in the joints, and ecchymoses on the extremities. He had been two months ill at the time his blood was analyzed. I give Professor Aldridge's observations on the analyses, as contained in a letter to me:—

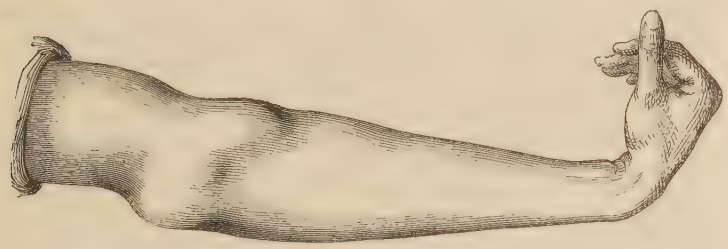
"The following are the results of the analyses of the two specimens of blood which I examined for you in July and August. You may recollect that our chief anxiety was to ascertain the proportionate quantities of the salts, and we were ready for that purpose to sacrifice the animal constituents. However, you will see by the following table that we can estimate the sum of the organic elements:

Contents of Blood.	Sandberg's.	Clarke's.
Water,	774·000	684·000
Solid matters dried at 212° F.,	226·000	317·000
Ash,	21·000	22·650
Soluble salts of ash,	7·672	11·150
Insoluble ditto,	13·328	11·500
Phosphoric acid in soluble salts,	1·750	0·400
Sulphuric acid in ditto,	2·250	3·150
Chlorine in ditto,	0·500	3·000
Potassium in ditto,	1·538	1·538
Sodium in ditto,	1·092	2·758
Phosphoric acid in insoluble salts,	0·500	0·900
Calcium in ditto,	0·344	0·600
Iron in ditto,	8·400	8·000

"You will perceive that both specimens are comparatively rich in animal matters and in iron. The deficiency of chloride of sodium in Sandberg's is probably attributable to this salt having been in great part driven off during the roasting; still this does not fully account for the difference between it and Clarke's, for the ashes of both contain about an equal quantity of charcoal. The great deficiency of alkaline phosphates in Clarke's blood is equally difficult to account for. It is strange that the sulphuric acid and potash should be so abundant, considering that the kind of food which scorbutus usually is attributed to is deficient in these substances. It is right to mention that the ash was roasted on copper gauze, and that the solution of the alkaline salts was in both instances neutral."

A Case of unreduced Dislocation of the Radius and Ulna backwards, of four Months' standing—Fore-arm completely and permanently extended. By James S. Hughes, F.R.C.S.I., Surgeon to Jervis-street Hospital.

John Tyrrell, aged 25, a labourer, admitted into Jervis-street Hospital on the 21st August, 1847, states that about four months since he fell a distance of thirty feet from a tree, on his right side, and that on being raised from the ground he found he had lost all power over the right fore-arm, which was in the fully extended position, and so locked that it could not be flexed in the slightest degree. Much inflammation and swelling ensued and cold lotions were applied to the joint. In one month after the accident a surgeon in the country pronounced the case to be one of dislocation of both bones of the fore-arm backwards, and attempted reduction, but unsuccessfully; and ten days before admission into Jervis-street Hospital he applied to a County Infirmary, where reduction by pulleys was tried, but without moving the displaced bones. The following note of the state of the limb was taken on his admission. The limb is in a permanently extended position; all attempts to flex it are unavail-



ing; there is slight preternatural lateral motion at the joint; the fore-arm is in a state of supination; when the joint is examined a very considerable prominence can be felt in front, caused by the lower end of the humerus, over which the tendon of the biceps muscle is stretched; the internal condyle is readily detected, but in

the site of the external condyle considerable prominence is observable; the head of the radius is easily felt behind and above the external condyle, and enjoys a limited degree of rotation, but the point of the finger cannot be sunk into its cup-like depression, as is usually the case in dislocation backwards; posteriorly the olecranon is very prominent, and is on a plane considerably higher than the internal condyle: the limb, when measured from the point of the acromion to the olecranon process, is an inch and a half shorter than that on the left side.

Having subjected the joint to preparatory treatment by steaming and passive motion, together with the use of liniments for some days, I proceeded, assisted by my colleagues, together with Messrs. Adams, L'Estrange, and Fleming, to attempt reduction by means of Mr. L'Estrange's pulleys. When extension had been applied, and steadily increased for upwards of half an hour, the patient was subjected to the inhalation of ether, to which, however, he would not submit long enough for any effect to be produced; he was then placed under the nauseating influence of tartar emetic; the extension was increased as far as was thought justifiable, when, having grasped the wrist with the left hand, flexion, by means of the right knee in the bend of the elbow, was forcibly attempted, the extending pulley power being suddenly taken off by means of Mr. L'Estrange's spring forceps; but all our efforts to move the displaced bones proved ineffectual. Reduction was subsequently tried round a bench, but without success.

Remarks.—The unusual position of the fore-arm in this case renders it one of peculiar interest to the surgeon: when we take into account the presence of the prominence at the site of the external condyle (caused probably by a quantity of callus thrown out), and the difficulty in feeling the cup-like depression on the head of the radius, it seems probable that a portion of the external condyle was broken off at the time of the accident, and carried backwards with the head of the radius; but it is questionable how far this in itself could account for the permanently extended position of the dislocated bones; had the biceps tendon, together with the brachialis muscle, been torn across, we might more fully account for the position of the limb; but it was quite evident to all who carefully examined the case, that the biceps muscle held its integrity, and was stretched over the lower end of the humerus. I have looked through most of the authorities on the subject of dislocations, and can find but one case on record, of dislocation of both bones of the fore-arm backwards, in which the limb was in the perfectly extended position. The case is published in the eleventh volume of the Lancet, and was brought before the Pathological Society of London by Mr. Langstaff. The report states, that "Mr. Langstaff exhibited a preparation shewing a peculiar dislocation of the elbow-joint; the following is the situation of the parts: the ulna and radius are thrown outwards and backwards, and the former bone has become anchylosed to the humerus in its new position; the

coronoid process of the ulna is united by bone to the posterior aspect of the rounded condyle of the humerus, with which the radius usually articulates, its olecranon process is anchylosed to the posterior surface of the epicondyle, while the outer half of the great sigmoid notch is filled with ossific matter, and is united by the same medium to the posterior surface of this condyle; the trochlear portion of the articulating surface of the humerus preserves its natural form, and is scarcely affected by the inflammatory action which succeeded the injury; but the condyloid articulating surface is concealed by an irregular bony lamina, which is adherent to its surface, and is attached inferiorly to the coronoid process of the ulna, and superiorly to the anterior surface of the humerus, immediately above its articulating surface. The head of the radius has been thrown completely off the humerus, and the interval between its superior surface and the epicondyle has been filled with coagulable lymph, which has been organized and converted into ligamentous substance; in the midst of this ligamentous substance a small mass of bone, of a triangular figure, has been deposited, and is converted into a point of support and articulation for the cup-shaped cavity on the head of the radius, while it is firmly attached to the middle of the cup by a strong inter-articular ligament, which secures the head of the bone, while it admits of the utmost degree of movement in rotation. The external condyloid ridge of the humerus has undergone a change corresponding with the new position of the radius, and is prolonged outwards to a considerable extent in the form of a sharp, bony crest, which gives attachment inferiorly to the ligamentous substance of the new joint for the radius. The lesser sigmoid notch is quite perfect, and its cartilage and synovial membrane healthy. From the mode of union of the anchylosed bones, the arm must have been placed in the *extended position.*"

The accident in Tyrrell's case is a deplorable one, as the limb in its present position is not of the slightest use to him. The case being very obscure, it becomes a difficult matter to account fully for the extended position of the limb; the length of time, however, that the dislocation has remained unreduced, and the quantity of callus thrown out, fully account for the failure of reduction. The case exhibits forcibly the necessity of looking well into the nature of accidents about the elbow-joint, and having recourse to proper treatment as early as possible. Had this patient's fore-arm assumed the usual semiflexed position in dislocations backwards, we might hold out hope of its ultimately being of some service to him; for in such unreduced cases the limb is not necessarily rendered permanently useless, as we know that in the lapse of time a new articulating surface is formed anterior to the coronoid process, the olecranon is shortened, the muscles accommodate themselves to the new arrangements of the parts, and the motions become more extensive, the limb remaining, of course, much shorter than the sound one; but unfortunately we cannot hold out such a hope in Tyrrell's case; owing to the permanently extended position of the fore-arm.

ILLUSTRIOUS PHYSICIANS AND SURGEONS IN IRELAND.

No. V.

JOHN OLIVER CURRAN, M. B.,

Professor of the Practice of Physic to the Apothecaries' Hall.

With a Portrait.

The present year is now drawing to a close; and all who have witnessed its singular and melancholy scenes must look back upon it with wonder and with dread. Its history will be a darkened page in the annals of our country, recording events whose nature may warrant the incredulity of after times. It will be difficult to believe at a future, and, we hope, a happier day, that, within a short distance of the capital of England, the seat of British intelligence, British power, wealth, and plenty, nearly a million of her subjects died of hunger or its consequences; of want, not resulting from their own improvidence, but from the long-threatened, yet not till then complete failure of a crop which was their only support. The record of this great and dreadful fact is engraved in characters so deep and strong that ages will not efface them. We have witnessed a nation's crisis, not of life but of death. The transition from misrule to neglect, from neglect to misery, from misery to famine, and from famine to pestilence, is easily understood; and now, in social disorder and paralyzing consternation, we see the cup of our country's sorrows continuing to overflow.

This is not the place to examine the various sources of the physical and moral calamities of Ireland, but we notice her last crushing sorrow, because that many others have followed in its train; for, while the poor were swept away in myriads, numbers of the better classes of society, including the best and bravest of our countrymen and brothers, who especially devoted themselves to save their fellow-men or mitigate their misery, were dragged down and perished with them. The young and high-born daughters of our land, the matrons of many a virtuous and happy home, the active and charitable proprietors, the devoted clergy, and, above all, the members of the medical profession, have fallen victims in numbers that are and ever will be unknown save to Him, who has declared that a cup of cold water given in His name shall in nowise lose its reward.

Among these martyrs stands pre-eminently the subject of this memoir. But a few days have elapsed since this good and faithful servant was laid in the grave, and hence his history, hastily drawn up, must be considered as imperfect and unworthy of him. Yet this is not the first time that a rude and simple monument has covered the noblest clay.

The sources of posthumous fame are many, but the glory of most men who have earned it seems ultimately to hang on some single attribute. The warrior, could he revisit the world, would point to

John Oliver Curran.

his conquests; the ruler to his laws; the philosopher to his discoveries; the divine to his teaching; the physician to his cures. In all, though their objects and labours may have been numerous and varied, there is more or less of dependence or connexion among them, and it is rare to see the memory of a great man consecrated for efforts and acts which seem opposed or uncongenial. But the brief career of John Oliver Curran will be remembered for what to most men seem opposing qualities;—for he was the impersonation of charity; all gentleness on the one hand, and the stern assertor of the right and contemner of power on the other. The Hampden of Irish medicine, he withstood the tyrant, but laid down his life in the cause of his country's safety, his profession's honour, and his friend's defence.

John Oliver Curran was born at Trooperfield, near Lisburn, in the county of Down, upon the 30th of April, 1819. His father is a member of the medical profession, but for many years he has ceased to practise it. In 1824 the elder Curran removed with his family to Douglas, in the Isle of Man, where he remained until his son completed his thirteenth year. During his residence in this locality Oliver Curran received the first rudiments of his education, originally at a mercantile school, and afterwards at a classical seminary. When a mere school-boy he was remarkable for a modest and obliging disposition, great clearness of intellect, and intelligence beyond his years; so much so, that while the majority of his companions were labouring to comprehend the ordinary course of instruction usually imparted in preparatory schools, his apt mind seized with avidity, and at once understood, the point at issue, and thus frequently anticipated the information of his preceptors. Being naturally of a contemplative mind, and gasping after such information as the books within his reach afforded, he seldom indulged in the common plays and amusement of boys of his age, but spent the greater portion of his play hours in reading and study.

In 1833 he entered the University of Glasgow, and applied himself with great assiduity to the study of mathematics, logics, and classics. Upon entering this university he successfully competed for the prizes in the Greek and Latin classics, and at a subsequent period for those of logics and moral philosophy. Of the matured state of his understanding at this early age, it may be mentioned, that at the time of Sir R. Peel's election for the Lord Rectorship of the University of Glasgow, young Curran was appointed one of the Committee for Lord Campbell. Even while engaged in the preliminary course of education, such was his ardour in the pursuit of knowledge, and such was his desire to outstrip his competitors in this noble race, that he at one time seriously impaired his health by over-application. During the last two sessions at the Glasgow University he devoted himself to the study of medicine, and attended the lectures on many of the elementary branches of that science.

In 1838 he entered the University of Dublin, as a student of both arts and medicine, but, having once determined upon his future profession, all his studies, physical, mathematical, and classical, were

made subservient to that one end. In addition to the ordinary curricula prescribed both by the universities and the schools of physic, he applied himelf with great assiduity to the study of modern languages, French in particular, a subject to which we would earnestly direct the attention of young medical men, and from which Oliver Curran, both in his studies upon the Continent, in his extensive reading, and in his intercourse with foreigners, derived no inconsiderable advantages. In his whole college career, and even in his very boyhood, he exhibited an uncommon aptitude for mathematical and philosophical pursuits; for astronomy in particular he had marked predilections, and when quite a boy constructed several ingenious instruments for making observations in that science.

To acquire a knowledge of the practical part of his profession, he became a student at the Meath Hospital, and attended with unwearying assiduity the medical wards of that institution, and the clinical instruction of Drs. Graves and Stokes. There are rewards and prizes during the undergraduate course of a young medical man, which, if gained, point with a tolerable degree of certainty to the success of his future career, and these, one and all, were sought and obtained by the subject of this memoir. In 1842 he obtained the stethoscopic and clinical prizes in the Meath Hospital, and Dr. Stokes's first prize for the practice of physic in the Park-street School of Medicine. In 1843 he obtained, by public examination, the situation of intern pupil in Jervis-street Hospital,—a post which he aspired to in order to become practically acquainted with the manipulations and mechanical part of surgery. This mode of election by general *concours*, to public medical and scientific situations, had long occupied the attention of our deceased friend; and although we are not prepared to go the length of saying that it is by any means the best, yet its introduction into this city would be a manifest improvement on the present system. He was afterwards Dr. O'Ferrall's clinical clerk in St. Vincent's Hospital.

In the summer of 1843 he took his degree of Bachelor of Medicine, and immediately afterwards proceeded to Paris, where he remained a year, assiduously devoting his entire time to dissection, observation of the practice pursued in the Parisian hospitals, and the cultivation of the acquaintance of the most eminent physicians and surgeons in that city of science,—an acquaintance which soon ripened into friendship, the result of mutual admiration and esteem. The estimation of Dr. Curran's ability and practical knowledge of his profession may be learned from the fact, that, during his stay in Paris, the French Government offered him an appointment as physician to the English and Irish labourers employed upon their railways. During his residence in France he addressed some very amusing and instructive letters to his relatives in the Isle of Man, upon the state of society, manners, &c., in Paris. These, though not intended by their author for publication, were printed in a local newspaper, and afterwards collected by his friends. He returned to Ireland the following year; and in 1846 he became a Licentiate of the King and Queen's College of Physicians, and in the same year was

elected Professor of the Practice of Medicine to the school of Apothecaries' Hall, one of the physicians to the Dublin General Dispensary, and also Secretary to the Council of the Pathological Society. Shortly after the Dublin Medical Journal passed into the hands of its present Editor, and at the time when it assumed its present form, Dr. Curran became one of its chief contributors,—a post which he filled up to the date of his last illness. He also communicated, during the last two years, some literary articles to the pages of our able contemporary, the Dublin University Magazine. In the summer of 1846 he returned to the Continent, chiefly for the purpose of visiting and remarking upon the lunatic asylums there; and the result of his observations appeared in the philosophical review of the Parliamentary Reports on Lunacy, which appeared in the third Number of our present series. During this sojourn on the Continent, he passed from France into Holland and Belgium, visiting the various hospitals, scientific institutions, and men of learning, in these countries. Subsequently to this visit several of the medical societies abroad conferred upon him their honorary or corresponding diplomas. Dr. Curran was a graduate of Trinity College, a member of the Royal Irish Academy, and had long been a most useful working member of the Royal Dublin Society, in which body he was one of the Council, and also a member of the Committee of Chemistry. In a word, there was no medical, and few literary or scientific societies in Dublin, of which he was not a member, and in most of them he took an active part.

We have thus briefly enumerated some of the epochs in the life, and noted down a few of the labours, of this excellent man; and before we enter more minutely into these labours, or offer our opinion upon his character and conduct, we think it right to notice a remarkable personal peculiarity which Dr. Curran rigidly adhered to up to the date of his last illness. He had never tasted animal food for upwards of three-and-twenty years; he had never drank wine or malt liquor except once, when he had typhus fever, in 1840, and his food consisted exclusively of milk, fruits, and farinacea.

It will be in the recollection of the readers of this periodical that a very learned review of Mr. Smith's book on "Fruits and Farinacea the proper Food for Man" appeared in our Number for September, 1845. This was Dr. Curran's first essay at reviewing; and for its critical analysis, its depth of learning, its philosophical inquiry, and literary composition, we believe few first efforts of the kind will bear comparison with it. As, however, there were some novel doctrines on the subject of dietetics, both in the work itself and in the critique, Dr. Curran, at our request, added a short history of his own experience in the matter, from which we extract the following passage:

"When about four years of age, having been much bantered by some friends on petting lambs and rabbits, and afterwards eating the flesh of such animals, in a fit of childish indignation he declared he would never again eat flesh. This resolution was adhered to, and his parents (who were not very much impressed with the necessity of animal food, and who believed that the whim would soon wear off)

not interfering, abstinence from animal food soon acquired the force of a habit, which has grown with his growth and strengthened with his strength, having now been persevered in for more than twenty-one years. Since the period mentioned he has entirely abstained from eating anything that ever had life, as well as from eggs and cheese; whilst he never partook of even one glass of wine, spirits, or any intoxicating liquor, nor does he make use of tea or coffee. His health has been invariably good, and at school and college he was possessed of more activity and strength than any of his associates of the same age, whilst he exceeded all in endurance. Though sedentary habits must have prevented the full development of his muscular powers, he has on more than one occasion walked sixty English miles in one day, without any other inconvenience than blistered feet. His weight is at this day within a pound of what it was at the same season seven years ago, but increases half a stone every summer, losing as much during the winter."

It was not, as some persons have supposed, any religious feeling which induced our friend to adopt and steadily adhere to this mode of life. In society and at the social board he partook of his frugal fare with apparently as much zest as those around him did of the costliest viands and the choicest wine, and he hob-nobbed in milk or ice-water with as much gaiety as others did in champagne. How far his mode of life might have influenced his last fatal illness it is difficult to say: but during the latter part of his disease wine was administered in considerable quantity.

As a lecturer he was remarkably plain, forcible, and explicit; in argument or debate, logical, forbearing, and persuasive;—learned without pedantry, he appeared rather to receive than impart instruction. His well-stored mind, the result of varied and extensive reading, travel, and observation, together with a modest demeanour, and towards his friends a most winning manner, rendered him in conversation most charming and instructive, while his high religious feeling never permitted a word or expression to escape his lips which might not be written on his monument. To those who had not the pleasure of his acquaintance, or mixed much in his society, this may seem excessive praise, but those who knew him best and longest will bear witness to its truth. The number of warmly attached friends which he possessed tell how susceptible his own heart was of the purest affection. Towards those he loved this affection became devotion,—a feeling so strong and generous that he sacrificed his life at its shrine. It was not alone, however, his learning and his knowledge which gained him admirers, nor his warm heart which surrounded him with friends; there was that within him evidenced in his life, and graven on the history of his actions, which commanded the respect of all,—unpurchasable HONESTY, and unbounded philanthropy.

To the student of medicine, the character, pursuits, and rapid elevation of this young man should form a model worthy of the closest imitation. Talents of a high order he undoubtedly possessed: but it was to his untiring energy, and unceasing study of his art,

that his elevation was due. Disdaining the grinder's crux or the school's dogma, he was the very antithesis to those who have been, with but little preliminary education, and perhaps less practical knowledge, pushed rapidly through the curriculum of a corporation or University at some of the doctor manufactories of the present day.

> Well may the dull their foolish fathers blame,
> Who jilted trade of many a useful name;
> To woo a mistress that will smiles dispense
> Alone to learning, talent, toil, and sense.

It was knowledge, not diplomas, which formed the object of his ambition, by which he hoped to win, and did win, the good opinion of the profession and the public. As a practical physician, imbued with the most philosophical views, as a teacher, as a writer, and, above all, as a man who stood forth nobly, at a considerable sacrifice, for the honour and the dignity of the medical profession, the school of Dublin has sustained in him a heavy loss.

As a writer, Dr. Curran was not much known to the medical world, his chief original article being that on scurvy, which appeared in our last Number. This is before our readers, and they can judge of its importance, its research, and the promise which it gave of future success. It was chiefly as a reviewer that Dr. Curran had as yet excelled. It is unnecessary for us in this Memoir to lay open the secrets of editorship, still we cannot in inditing this notice of one of our most valuable contributors, refrain from pointing to a few specimens out of many of his able productions, in addition to those already alluded to. The review of "Homœopathy and Homœopathic Writings," which appeared in February, 1846, shewed how well fitted he was to enter the list with the votaries of Hahnemann. There was this remarkable peculiarity in the construction of Curran's mind,—pure and void of all guile himself, he did not always read human nature, as presented to him in the living subject, aright; he could not bring himself in a moment to believe that hypocrisy and deceit influenced the actions or polluted the lips of those with whom he conversed; yet no man sooner recognised a quack from his writings, and to this quick perception may be traced some of those necessary castigations which the honour of science, and the vindication of truth, has caused us to insert in our Periodical during the last two years. Severe, however, as were his strictures, they were never personal, nor "whetted on ill-natured stone;" it was books, principles, practice, and literature, not men, he analysed. The Pathological Reports were entirely published under his superintendence, and the Medical Periscope which appeared in August, 1846, shewed how conversant he was with foreign medical literature.

His writings are eminently remarkable for their unbounded research, their power of argument and perspicuity of style; no man understood better the force and value of the English language.

Although Dr. Curran took no active part in politics, and was not associated with any of the political confederations of the day, he felt warmly, and took a lively interest in the national cause. To

elevate us in the scale of nations he not only toiled, but by his conduct and deportment in his life and actions (the true tests of patriotism), mainly contributed.

We now approach a period in our friend's short but bright career, in which he played a part in the history of this unhappy land, which future annalists will, no doubt, hand down to distant posterity, as an instance of philanthropy, devotion, and patriotism, worthy a primitive and more refined age.

Plague, pestilence, and famine, spread over the face of the land, and threatened the annihilation of our population. To meet their ravages, some temporary machinery was constructed by the Government, a Board of Health among the rest. We have no desire in this memoir to enter upon the subject of the applicability of the measures prescribed by the State to meet the exigencies of the times, nor at all allude to matters of a political nature. During the last winter and spring the fever was chiefly confined to the country parts, and the ordinary appliances in the city were deemed sufficient for the number of our poor affected by the epidemic. As, however, summer approached, Dublin was attacked by the pestilence, and extraordinary measures had to be taken to afford shelter and relief to the multitudes who daily sickened in the lanes and alleys, the garrets and cellars, of the ruined and dilapidated districts of our capital. Temporary fever hospitals had to be erected, and an additional staff of medical officers appointed. One of the first persons appointed by the Board of Health was Dr. Curran. The official document intimating the circumstance to him stated that he was to receive a "*remuneration of five shillings per day.*" Astonished and indignant at such a scale of wages being offered to a member of the medical profession, he immediately consulted some of his friends, stating his unwillingness to accept the post on such terms, and his desire to resign immediately. Those he consulted considered that it would be more advisable to take the opinion of other members of the profession on the subject, particularly as it was a matter which concerned not only the respectability and welfare of the body at large, but the interests of all those who might hereafter be appointed. Accordingly, some twenty members of the profession were immediately summoned, and met together the following day, to consider the propriety of Dr. Curran's resigning, and the advisability of holding a public meeting to remonstrate against medical grievances in general, and the act of the Board of Health in particular. At this meeting Dr. Curran stated his intention of resigning, but agreed to wait for some days and abide by the decision of the public meeting.

A requisition calling a public meeting of the profession at the Royal Dublin Society House was immediately signed by those who were present, advertised in the newspapers, and within the two next days it bore the signatures of upwards of seventy physicians and surgeons resident in Dublin, including every man of eminence unconnected with the Board of Health. The meeting was fixed for Tuesday, the 1st of June last; a committee was appointed to conduct the proceedings; resolutions were drawn up, and placed in the

hands of the respective persons who were to move them. That meeting was never held. One of the chief causes of this arose from the circumstance of the chairman having upon the day previous refused to act, and others having objected to move resolutions, under the impression that a memorial was more advisable than a public meeting(*a*). These are the naked facts. We have no desire to enter upon the question at issue at present between the profession and the Board of Health, it has been already ably discussed elsewhere, but the following statement is here necessary. As soon as it was determined not to hold the meeting, Dr. Curran immediately resigned, informing the Board of Health that, consistent with the dignity and honour of the profession to which he belonged, he could not accept the remuneration offered in their appointment. Some time previously to this appointment Dr. Curran had been elected one of the physicians to the Dublin General Dispensary,—an office of immense labour, and entirely without emolument. Those only who have toiled amongst the poor of a large city can form any idea of the extent of this labour. In the wretched abodes of misery, in the crowded, ill-ventilated rooms, each often inhabited by several families of the very poorest classes, and located in the most miserable and filthy situations, where infection ever remains endemic, and where want adds fuel to the pestilence,—there lay the public practice of Dr. Curran,—there was his charity expended,—there his skill exhibited,—late and early, there he toiled.

The calamities which had invaded Ireland having threatened the Continent, the French Government sent M. Rodier and M. Henri Gueneau De Mussy as medical commissioners to inquire into the management of fever, and to study the character of the epidemic in Dublin. Now, one of the most amiable traits in Dr. Curran's character was his unceasing attention to foreigners; few medical men of other countries visited our metropolis during the last few years who did not experience his devotion to their service, in introducing them to the profession, conducting them round the various institutions, and escorting them to the most interesting localities in and about our city. M. De Mussy had long been the personal friend of Curran; and during the course of his inquiries into the character of our epidemic he was much assisted by his friend, who accompanied him to the various fever localities and hospitals. In one of these visits they witnessed that heart-rending scene which elicited the ever-memorable letter of John Oliver Curran, detailing the frightful neglect of the fever-stricken population of our metropolis, which appeared in Saunders's News-Letter and the Freeman's Journal of the 24th of last August. We will not quote one sentence of this spirited and benevolent appeal to the sympathies of Europe; the scenes which it so graphically and feelingly described are engraven upon the hearts of the humane of every country in which they were published; they have been fully acknowledged by all competent authorities; their truth has been sealed with blood: the echoes of this appeal are still

(*a*) The resolutions and memorial intended to be adopted at this meeting were embodied in the representation to the Lord Lieutenant.

murmuring through every land that possesses a literature. This letter has become a part of our history. Let it then never be forgotten by the Irish people that to this courageous, honest, and indignant appeal, made in their behalf to the sympathies and benevolence of Europe, were the gates of fever sheds, the barred portals of hospitals, and the stern hearts of rulers, opened, to afford them shelter and a cup of water, when they blackened, exposed to the sun and sky, in the lanes and ditches around our metropolis.

Gueneau De Mussy, in his active and untiring inquiries late and early at the fever sheds, contracted typhus of the very worst description; from the moment he took ill Curran became his nurse, seldom leaving him day or night, neglecting all his other duties, and devoting himself with the noblest heroism to his friend, till at length the fatal typhus claimed him also for its victim. The disease very soon exhibited a most malignant type, presenting all the characters which it assumes in those who have much exercised their intellectual faculties. To violent delirium succeeded prostration and collapse; and, notwithstanding all that the skill and brotherly aid of some of the ablest men of the profession could effect, he sunk rapidly upon the ninth day of the fever, and expired at 9 o'clock on Sunday morning, the 26th of September, 1847, in the twenty-eighth year of his age(*a*). The gloom which spread through all classes as soon as his death became known need not be described,—it has scarcely yet passed away.

The entire British press, with one exception(*b*), have paid just tributes of respect to his memory.

(*a*) In recording the death of Dr. Curran, and alluding to the illness of our friend De Mussy, we feel a mournful pride, while we offer our thanks to the several young medical men and students, who, with dauntless courage and untiring zeal, watched for days by the sick bed of these gentlemen.

(*b*) The journal to which we allude is the Dublin Evening Post, the official organ of the Irish Government and the Board of Health.

The brutal ferocity of an article published in that journal on the 12th of October last, attempting to asperse the memory of this good and pure-minded young man, is only equalled by its utter want of truth. It is,—can we believe such heartlesness?—an *answer!* to the tribute paid to his worth by a contemporary journal, the Lancet. It is *not true*, as the writer well knew, that Dr. Curran contracted the fever of which he died, "in the cellars and garrets of the poor," and it is as ungenerous as it is false to assert it. It is *not true*, as the writer in the Post must be very well aware, that Dr. Curran visited these miserable dwellings of the poor "in pursuit of that information which, but for evil councils, he could have obtained with comparatively little risk of infection in well ventilated hospitals;" and to put forward such a statement is to rob his character of that benevolence and charity which the writer, not knowing or feeling himself, can neither understand nor appreciate in others.

It is *not true* (we have the authority of his nearest relatives for saying so), that Dr. Curran ever regretted his dignified refusal of the wages of the Board of Health, or that his own unbiassed judgment would have led him to accept it. It is equally *untrue*, and that the writer knows also, that he was driven to "sinks of contagion" by the advice of his friends; his gratuitous attendance upon the poor of Dublin having commenced long prior to his five shilling appointment.

It is a fact of which the (medical) Editor of the Post must be fully con-

"The kind and generous disposition," says the Freeman's Journal, "which characterised Dr. Curran in the private relations of life, won for him the esteem and affection of all who had the privilege of his acquaintance. Among his professional brethren his opinion, notwithstanding his youth, ranked with that of the seniors of the profession, and he was as justly as he was generally recognised as one who, had he been spared, must ere long have taken a first place. To his mourning friends,—and the circle embraces all who knew him,—there is some consolation in the reflection that it was Dr. Curran who gave shelter to the fever-stricken, and relieved our city from the odium of cruelty and neglect."

The Medical Gazette, alluding to his treatment of the poor, justly observes:

"That any man should be found who could thus give up his time, and exercise gratuitously his professional skill in the treatment of cases in which his life was constantly exposed to the greatest danger, is a fact which must surely satisfy the Government that they have taken a false step in this matter. It is not often that so great a sacrifice is made, or that the honour of the medical profession is so sternly considered as it has been in this instance."

The Lancet, the stern and uncompromising advocate of Irish medical independence, contains the following remarks, as just as they are true:

"His public life had extended over but a few months; but in that short time he had endeared himself to friends and opponents; and all sects and parties among his fellow-citizens have been loud in his praises. His was indeed true glory, and deserves of his country a better monument than the soldier or the politician.

"His spirited remonstrance to the Board of Health roused the profession in Ireland; the chords were struck by the right hand, and his single signature was, as our readers know, promptly backed by more than eleven hundred names, from the Presidents of the Colleges of Physicians and Surgeons, down to the youngest practitioners. More recently, his vivid and benevolent descriptions of the heaps of fever-stricken dead and dying waiting for admission to the fever-sheds, at Kilmainham and other places, produced an extraor-

scious, that the Government were warned of the danger and imprudence of shutting up Cork-street hospital; and also of its having been re-opened a few mornings after Curran's letter appeared.

The reason of Dr. Curran resigning his appointment,—to an office, it must be remembered, not then in operation,—has been explained in the text of this biography, and the many gentlemen who attended the preliminary meeting alluded to can vouch for its accuracy.

The numerous friends of Dr. Curran know that the accusation of the Post, that in his conduct so often referred to he was but a "dupe" and a "victim," is a groundless calumny.

To the Editor of the Dublin Evening Post these remarks are not applied; but to the medical writer in that periodical. We must, however, remind our friend, that although his paper is the organ of the Government, there is an editorial censorship to be observed, and a respect for truth and honour, for which he should be answerable.

dinary excitement in Dublin, and led to a better and more humane state of action than had previously prevailed among the Board of Health, the Relief Commissioners, and the Irish Executive. And now he has sadly, but perhaps appropriately, closed his brief but glorious career, by setting the seal of his life to his professional and philanthropic devotion. Benevolence has marked him for her own. He has added another name to 'the noble army of martyrs' which our profession must furnish to science and to civilization. Not even Sidney Bernard(*a*), the volunteer martyr of the 'Eclair,' deserves to be more dearly remembered than Oliver Curran,—the one an assistant-surgeon, the other a young dispensary physician. Our young men may be proud when they furnish such examples to the profession and to mankind. Galen fled from Rome on the approach of pestilence, and Sydenham retired from London before the great plague; but here are novitiates of modern times nobly eclipsing in fame the ancient sages and veterans of medicine."

Saunders's News-Letter also paid its tribute of respect; and Lemoinne, the able conductor of the *Journal des Debats*, has penned an eloquent eulogium upon our friend, who was, he truly observes,

"One of the hopes of his country. His death is a loss to Ireland, to whom he had consecrated his life,—to his friends, who had for him such respect and affection.

"Poor Curran! Such a pure, simple, disinterested, and patriotic soul! Never have I heard a word uttered by him which was not upon Ireland and for Ireland. His unhappy country, which he saw writhing and dying in misery, hunger, and fever, was his sole thought—his greatest unhappiness.

"As we well know, the best and most worthy homage we can pay to his memory is, to appeal on behalf of Ireland, for recompense for the loss she has sustained, that the life of sacrifice and devotion which he led upon this earth may be counted in favour of his unhappy country."

Among the many wants in Irish character,—of industry, love of truth, respect for the laws, hatred of murder, and others equally dark and lamentable, which we must own to, and should strive to correct,—there is none that has exercised a more pernicious influence than want of independence. By what means this has been produced, whether it is inherent in the race or is the acquired result of circumstances, we cannot here discuss; but we allude to this peculiar national trait, because the subject of this memoir was an instance of the contrary: no man ever possessed a more independent spirit than John Oliver Curran. This independence of character not only influenced his actions, but at times rendered him positive in opinion.

It has been truly observed, in some of these quotations, that Dr. Curran was one of the most promising young physicians in Dublin; he had already made rapid strides in his noble career, and gave bright promise of the future.

Let it ever be remembered by the Irish medical profession that

(*a*) Sidney Bernard, the Eclair martyr, was also an Irishman, and had been an apprentice of the late Dr. Colles.

he was the man who first raised his voice against the insult and indignity offered to that body, by refusing to accept the miserable stipend proposed as remuneration for risking their lives in defending the Irish peasant and artisan from the ravages of the pestilence which now stalks amongst us. And yet, while he thus spurned the degrading offer, for the benefit of his brethren, he daily toiled without fee or reward, in the haunts of misery and distress, to relieve suffering, and to succour the fever-stricken poor: and in his generous endeavour to rescue others, in his love for his friend and his duty towards the stranger, he himself fell a sacrifice to the Moloch of pestilence. His death is a national calamity.

Disregardless of danger, he grappled with the plague; patriotic and generous, he devoted his time, his genius, and his knowledge, to his country, to science, and his friends. In John Oliver Curran his family have lost the most feeling and affectionate of relatives; an aged father his only son; his friends a soul of sterling and enduring worth, unalloyed by selfishness, unpurchaseable from its allegiance; the Irish School of Medicine, the University, and the Royal Academy, one of their most promising sons. Science may mourn the most devoted of her votaries; Ireland a man whom she could never spare, now least of all; and humanity a friend. For our rising literature his able pen was wielded; for our dawning nationality his manly voice was raised. Gentle and unobtrusive in his manner, a tone of serious thought and an extraordinary fund of information, with a remarkable facility and clearness of expression, graced his conversation, and rendered him one of the most delightful and instructive of companions. If being utterly devoid of envy towards others, and a holy, never-failing desire to do good, could insure a man the world's friendship, then had Dr. Curran no enemies(*a*).

MEMOIR OF JAMES HOUGHTON, M.D.

To the long list of medical martyrs, who have fallen victims to the prevailing epidemic, we have to add the name of Dr. James Houghton, of Brookboro', in the county of Fermanagh, who died on the 3rd of October, after an illness of twenty-eight days. By all who knew him his loss will be long and deeply deplored, as he had, by arduous and unceasing toil in the public service, and the most unselfish devotion to the wants of the poor, gained most fully the esteem and affection of all who required his aid or witnessed his devotion to the several branches of his profession. Dr. Houghton graduated in Edinburgh in the year 1829, having previously studied medicine

(*a*) The portrait which accompanies this memoir will be recognised as an admirable likeness of our diseased friend. It has been lithographed by Lynch, from a drawing made after death by Mr. Ford, whose courage as well as artistic skill, in sitting for several hours in such close proximity to infection, we feel bound to mention. We had also the assistance of a daguerreotype and a cast, the former, however, of little value.

during several years in the University of Dublin and the Meath Hospital. On taking his degree he settled in Dublin, and became attached to an extensive charitable institution, to the duties of which he devoted himself with zeal and assiduity. During this period, having been recommended by Dr. Stokes to the editors of the Cyclopædia of Practical Medicine as fully competent to aid them in forwarding that important and valuable work, he contributed to it several articles,—those on lepra, scabies, lichen, lupus, urticaria, organic diseases of the stomach, and pneumothorax, being written by him. There are few of our readers who have not probably had occasion to admire the two last of these articles, which contain the best history of these important diseases to be found in medical literature, and which were well calculated to establish for their author the character of an accurate observer, a sound reasoner, and a careful practitioner; and it is highly probable, had Dr. Houghton remained in Dublin, such and similar contributions to medical science would soon have given him considerable practice in his profession. But just at this period, when his position was being established, Dr. Houghton conceived it to be his duty to relinquish his position in Dublin and retire to the country, where, in one of the wildest mountain districts of the north of Ireland, he devoted himself almost gratuitously to the relief of the poor; and for many years, with the devotion and self-denial of a more primitive age, he led a life of unrequited labour such as few could imagine, far less endure; by day and night wandering among pathless hills to convey to the bed of sickness, or the home of want, the alleviation of his professional skill, or the perhaps more needed sustenance contributed from his own scanty resources. Wherever there was any one "afflicted or distressed in mind, body, or estate," they were sure to find comfort in his sympathy, or substantial aid from benevolence wrought on by his representations and stimulated by his example; and to him might most truly be applied the beautiful lines of Dr. Johnson:

> In misery's darkest caverns known
> His useful care was ever nigh;
> Where hopeless anguish poured his groan,
> And lonely want retired to die.

About two years since, he was induced to remove to Brookboro', where he was appointed physician to the dispensary and hospital, and where he also had the inducement of the society of one of his oldest friends; and there, during the past year of famine and disease, he still pursued the same career of unselfish devotion to the wants of the poor, and the same unceasing anxiety to perform his duty as a physician and a Christian, by undying zeal, unceasing labour, unrequited benevolence, and the most holy assiduity in conferring moral benefits upon all those with whom he had intercourse. In the midst of this career of usefulness he was cut off, having, in the discharge of public medical duties, contracted fever, which his anxiety for others caused him to neglect, until he was stricken down and removed from the scene of his labours to that rest which he had always looked forward to as only attainable in another life.

A LETTER TO THE EDITOR OF THE DUBLIN QUARTERLY JOURNAL OF MEDICAL SCIENCE, RELATIVE TO THE PROCEEDINGS OF THE CENTRAL BOARD OF HEALTH OF IRELAND.

By ROBERT JAMES GRAVES, M. D.

Sir,—I was for many years connected with your Journal, both as editor and contributor, and therefore hope you will allow me to claim the privilege of addressing you on a subject somewhat different from those which generally occupy the pages of your excellent periodical. As you have taken so active and useful a part in vindicating the honour of the profession, with respect to the remuneration offered by the Board of Health to physicians of fever hospitals and dispensaries, I need say nothing to enlist your sympathy or insure your cooperation.

Having been my pupil, and diligently attended my clinical instruction, you may, perhaps, bear not an unwilling testimony to the fact, that I ever used my best efforts to stimulate my pupils to exertion, and devoted all my energies to awaken in them a proper estimate of the responsibility they were to incur when they entered upon the practice of their profession. Having laboured for upwards of twenty years in instructing a numerous class of students, I may assert with truth, that there are few hospitals or dispensaries which are not occupied by some of my pupils. And consequently, at this present calamitous period, I am destined to feel a mixed sensation of pleasure and of sorrow;—of pleasure, at finding that my labours have not been altogether unavailing, as is testified by the zeal and ability of many who have formed part of my clinical class;—of sorrow, caused by receiving almost daily accounts that some have sickened and others have actually fallen victims to the present epidemic. The probability of such a mortality I never omitted to state in my course of lectures; and I warned those who heard me, not only of the honour they might earn, but of the dangers they were to incur. But, Sir, when, judging by the experience of the past, I thus anticipated the future, it nevertheless appeared to me that, notwithstanding those dangers, I was justified in exhorting them to perseverance; for I felt, and endeavoured to make them feel, that the profession in which they were engaged was endowed with sacred attributes, sufficient to compensate for its difficulties and its trials. To create life is the attribute of God; to preserve life is the noblest gift man has received from his Creator. Life and death are engaged in an eternal struggle—they succeed—they alter-

nate—they displace, but never annihilate the one the other; they fill the world with their strife, but it is a strife where the antagonists contend like night and day, each chasing but never overtaking each. Between life and death there is no twilight; the gladness and brightness of life end suddenly in the deep and awful darkness of death. Is it, then, given to man to warn back this dreaded power? Can man, even for a moment, retard the advances of death? Yes, we are permitted to relieve one another; we are allowed to exercise our reason in exploring the means of curing disease, and have been granted the power of applying these means successfully. Had man, like other animals, been gifted only with organs of destruction,—had his reason been solely employed in increasing the power of his natural weapons of offence,—then, indeed, he would have been an animal accursed on the face of the earth, and war and bloodshed would have been blessings if they only effected the destruction of so hateful a being: but it has not been so ordained. The possession and exercise of the healing art shed a kindly lustre over man's nature, and afford him the means of practising the sweetest of all the offices of charity,—curing his fellow-creatures: but if this be one of the goodliest fruits borne by the tree of knowledge, it cannot be attained nor enjoyed by all; it can only be reached by him who, patiently labouring year after year, has perseverance enough to seek, by means of constant study and constant observation, this precious gift. I would not depreciate the utility of other literary pursuits, and do not wish to undervalue the studies or the objects of other professions. The natural historian is justly proud of a science which constantly employs him in observing the works of his Creator; the chemist boasts, with justice, that his favourite study teaches him to lift up the veil which concealed some of the most precious and singular among nature's secrets; the astronomer examines the position and the motions of distant worlds, weighs the satellites of Jupiter, and from the perturbation of his motions, Le Verrier divines the existence of another planet.

This is a glorious triumph of man's reason, and well may the votaries of astronomy and the physical sciences refer with pride to such victories; but is there not more of the Deity in a single particle of living matter than in the whole inanimate mass of a planet or a sun? Is not life the clearest, the most direct revelation of himself, which the Creator has deigned to make.

When all was without form and void, the Spirit of God moved, it is true, on the surface of the chaotic mass, but it did

not enter into its pores until life was to be produced; then God breathed forth, and man rose vivified by the divine expiration. This life, this direct emanation from the Deity, forms then the subject-matter of our studies; to observe its laws is the privilege of the physiologist; to maintain it, to resist the encroachment of disease, or defer the approach of death, is the hallowed office of medical science. This is assuredly one of the noblest functions of reason, and for nothing should man be more humbly grateful to his Maker than for having conferred on him the power of relieving human suffering.

Our profession, it is true, does not offer a number of great prizes, such as tempt the passions and excite the emulation of those who devote themselves to the practice of the law; but still medicine has advantages more than enough to counterbalance this apparent deficiency. The path of the successful lawyer leads, indeed, to the highest pinnacles of worldly preferment; wealth and honours tempt him onwards, for every year witnesses, and witnesses deservedly, the highest titles conferred upon individuals who have distinguished themselves at advocates. No such prospects, no such rewards, scatter rays of hope over the weary and devious tracks by which the struggling practitioner of medicine is doomed to travel; he looks not for power and patronage; the senate-house does not, in his forward view, terminate the perspective, nor can his fancy busy herself with limning the outlines of the coronet, destined in future years to adorn his escutcheon: the worldly allurements are great which stimulate the efforts of the jurist, — nothing is wanting, all the most powerful and secret springs of the soul are touched, and the whole man, body and mind, engages with ardour in the contest for wealth and rank. Not so the physician: the distant horizon which bounds *his* view is not thus illuminated; it conceals not below its verge objects of ambition so brilliant, rewards so bright, that they diffuse round them a crown of light before they themselves are actually within ken; he lives not in an atmosphere of hope, endowed with a refractory power strong enough to lift upwards the still unrisen orb, whose bended rays thus reveal to the eye the long-desired object of ambition, and impart the refreshing influence of light and heat.

But is there nought to guide us while wandering in the darksome ways which must be trodden by every medical man at the commencement of his journey? Yes, for though Hope bears us not along with so powerful an impulse, yet her still sweeter sister, Charity, stretches forth her hand to support the physician in his exertion; Charity, the spirit of good will

towards man, points to the sick man's bed, and, though it be the bed of poverty, *there* will the physician find his reward, there will he earn the recompense of saving life, of restoring health.

This is the advantage the medical profession enjoys above all others; we can, without any outlay of capital, enrich the poor, for to the labourer health is riches. The habit of doing good is soon acquired, and generally ripens into a necessity which forces its happy possessor to increased and more energetic action, and repays his labour daily and hourly with the most gratifying of all feelings, the conviction that he is at the same time increasing his own knowledge and mitigating the pains of the poor and needy. Other professions are busied with the works of man. The jurist studies his laws, the historian records remarkable events, and endeavours to unfold their relation to each other, and to expose the motives of the chief actors; but the medical man is employed in observing not the works or devices of man, but the laws which regulate health and disease, laws bearing on them the impress and sanction of the Deity. It is in consequence of this that our art is one of which no human power can deprive, no revolution rob us. In times of violence and anarchy, if the lawyer be driven from his native shores, his craft will avail him nothing in countries governed by laws very different from those he has studied; should the merchant be deprived of his capital, how will he carry on his traffic? The buildings, warehouses, and machinery of the manufacturer may be destroyed in a night, and himself thus ruined, but what but the strong hand of death or disease can rob the physician of his power to cure? What land so foreign that he cannot in it earn a reputation by the exercise of his noble profession? The man who can dexterously set a broken limb, or skilfully treat a fever, may become an exile, but he will never be a stranger; for wherever he goes, whether he practises in Africa, in India, or in China, he will be considered as a friend by the natives. The accounts of travellers all agree in attesting the truth of this statement, and it was the gratitude for receiving a physician to heal their sick that gained from the natives of India the permission to establish the first English factory there; it was the skill of the accompanying physician which facilitated the progress of some of our most enterprising fellow-countrymen through the unexplored countries of Africa; it was the favour earned by the surgeon that unsealed some of the closed ports of the *Celestial Empire*, and opened new regions for the exercise of British enterprise and the profitable employment of British commerce.

Such, Sir, are the motives which should guide every honourable mind in the study and practice of the medical profession; such are the views of its ennobling nature that ought to cheer us in our struggles with dangers and difficulties; and such are the claims of the healing art on peoples and governments. Principles and feelings such as these I have constantly endeavoured to inculcate on the minds of my pupils; and I regret not that I have sometimes kindled the spirit of enthusiasm in their breasts, as it may even now serve to prevent them from being contaminated by the grovelling example of those who labour to corrupt them.

In Ireland, generally, the practitioners of medicine and surgery have been long conspicuous for their philanthropy, and for the great zeal they have displayed in relieving the sufferings of the sick poor; but in Dublin especially the munificence of the profession is permanently attested by the great charitable institutions they founded and endowed, such as Sir Patrick Dun's Hospital, Steevens' Hospital, the Lying-in Hospital, &c. When dispensaries did not exist in this country, and fever hospitals and infirmaries were unknown, the attendance on the sick poor was gratuitously performed by practitioners who devoted a part of each day to the labours of charity. As the population increased, the system of voluntary medical relief became necessarily inadequate, and consequently hospitals, infirmaries, and dispensaries were founded, and were brought into active operation, not on one great and comprehensive plan suited to the national wants, but in an insulated, unconnected, and irregular manner, such as might be expected in a country where the Government paid but little attention to internal administration, its object being rather to maintain political animosity between the different sections of its Irish subjects than to extend to all the beneficent influence of a paternal and fostering care. Hence it came to pass that, while enough was done to dry up the sources of voluntary exertion, still but little was effected in comparison with the requirements of the case, while on all sides it was manifest that the Government and the public were but ill-disposed to remunerate medical men for their services in an adequate manner. Then it was that the evil of which we now complain commenced. The moment that charity ceased to be the sole guardian of the sick poor,—the moment that public boards, government officials, and local committees, took into their hands the superintendence and administration of medical relief,—that moment Mammon interfered and spoiled the goodly work. Medical practitioners had now to deal with hard taskmasters, who, misinterpreting the

motives of their former exertions, argued, that the labour so long gratuitously bestowed could always be commanded at a small price. Thus commenced the system of medical degradation, and from that period every year has witnessed an increasing tendency to curtail the salaries for attendance, and an increasing indifference with respect to the manner in which their duties were performed, provided always that they were performed cheaply. When at length a Board of Health, consisting of medical men, was appointed by the Government, it was hoped that the remuneration of the profession would be placed on a better footing: but, Sir, as soon as the constitution of that Board was known, many augured, and, it seems, augured truly, a very different result; for they argued that it did not embrace persons likely to struggle against the parsimonious determination of the Government, to extend to Ireland, with the new Poor Law, the debased system of medical relief which has so long disgraced the administration of that law in England. And but too truly has this gloomy anticipation been verified; for the cruel manner in which the poor have been treated during the present epidemic,—the gross neglect, on the part of the authorities, of their suffering,—and the paltry economy everywhere observable in the care of the sick,—has excited the pity, and aroused the indignation of the Press throughout Europe, to such a degree, as is remarked by the Editor of the *Times* (Sept. 8th), that the *Journal des Debats*, irritated at the failure of Narvaez at Madrid, avenges itself on England, by citing as shameful the conduct of the Government in not providing sufficient hospital accommodation for fever patients in Ireland.

"After referring to the number of the Irish emigrants to America cut off by the ship fever, the *Debats* proceeds thus:

"'Such is the manner in which matters passed on the high seas and in the colonies. But in the mother country, in the centre of civilization, and in the immediate neighbourhood of the seat of wealth, of information, and under the eye of the Government, no doubt it is otherwise; no doubt, more attention is paid to preserve the lives of men; no doubt, thousands of human creatures are not abandoned to the ravages of fever and plague. We would we could say so, but we cannot. Moreover, it is not we who speak; we shall merely quote the lamentable relations which we find in the English and Irish journals. They are sufficient to excite pity in the most impenetrable hearts. We do not wish to use the word 'indignation,' because we believe that much has been done to alleviate the consequences of a terrible calamity; but by the picture drawn of the state of the population of Dublin, we may judge of what still remains to be accomplished in Ireland. It appears that famine, and all the evils which ensue from the most absolute poverty, have en-

gendered and developed in that country a typhoid fever of a special nature, which appears likely to furnish science with subjects of useful observation. We know that two distinguished French physicians, M. Henri Gueneau de Mussy, and M. Rodier, are at this moment in Ireland, for the purpose of studying this malady more particularly; and we do not doubt but that the description they propose to publish, will be equally interesting for political economy and medical science. We see in the Dublin papers that they have gone to see, in company with Dr. Curran, the provisional asylums established in that city to receive the fever patients who could not find a place in the over-crowded hospitals.' [Here follows a description of the sheds prepared for the fever patients in Dublin, which has already appeared in the *Times*]. The *Journal des Debats* concludes in the following terms: 'There is not room in the hospitals! The fever came too rapidly! And the beds have been suppressed! Such are the excuses offered to public clamour and to outraged humanity! We repeat that it is not we who speak,—it is not we who accuse. We do not wish to have the appearance of mixing the most remote symptom of political hostility with a question of pure humanity. We do not, in general, join in the exaggerated accusations made against England with respect to Ireland. But, if such facts appeared to pass with impunity, and if such scenes were suffered to continue, every accusation possible would be justified. We are happy to find, moreover, that the British press is doing its duty, and we trust that it possesses sufficient influence to cause justice to be done.' "

I rejoice that the public attention has been thus forcibly drawn to the miseries around us; it is well that the political jealousy of a neighbouring and rival nation should be the means of shaming the authorities into a more humane treatment of the sick poor. To admit the necessity and the justice of our thus receiving chastisement at the hands of foreign journalists is truly humiliating; but you, Sir, do not share in the blame, nor are chargeable with having contributed to this melancholy result, for you were one of the very first who with honest indignation struggled against the power of authority, and helped to raise the curtain which hid from the Public the doings of the charnel-house. As you were among the principal promoters of a public meeting of the medical profession, on the occasion of Dr. Curran's(*a*) having refused the appointment

(*a*) Since this letter went to press Dr. Curran died of typhus fever, contracted during his gratuitous attendance upon the poor. His premature and melancholy fate has excited the sympathy not only of his private friends, but of the public at large, and several well-merited eulogiums on his character have appeared in the daily and weekly journals. I rejoice to find that the present number of this periodical contains the memoir of the man, who, scorning to be purchased a cheap victim, offered himself as a voluntary sacrifice in the cause of humanity, and dared to rebuke our rulers, in an appeal so truthful, so powerful, that his lone voice crying for succour to the sick and the

of physician to a fever hospital, at a salary of five shillings a day, it may be necessary to explain the reason which induced me to withdraw my name from the list of those who summoned that meeting. Many who had the interest of the profession most at heart, and were capable of judging of the best course to be pursued under the circumstances, were of opinion that a memorial to Government was the most dignified, and perhaps also the more efficient method of proceeding; and, as was subsequently proved, the majority of the profession concurred in this opinion, the following memorial having been signed by upwards of one thousand one hundred practitioners:

"TO HIS EXCELLENCY GEORGE WILLIAM FREDERICK EARL OF CLARENDON, LORD LIEUTENANT GENERAL AND GENERAL GOVERNOR OF IRELAND.

"MAY IT PLEASE YOUR EXCELLENCY,

"We, the undersigned Physicians and Surgeons in Ireland, beg leave respectfully to represent to your Excellency that the members of the medical profession in Ireland are frequently called upon to perform public professional duties for the benefit of the community at large, and that the zeal and efficiency with which those duties are discharged, together with their importance to the public welfare, eminently entitle that profession to the protection and support of the Government.

"It is right to draw your Excellency's attention to the fact, that statistical returns for upwards of twenty-five years exhibit a fearful mortality from fever among the medical men of this country, and recent events have shewn that from the same cause we have to deplore the loss of many of the best and most efficient practitioners, who contracted typhus fever in the discharge of their duties among the sick poor.

"We feel that the members of the medical profession have reason to complain that they sustain hardship and injustice when employed in the public service; as in some instances, from the imperfection of existing laws, medical practitioners are denied any remuneration whatever for such services, or are constrained to accept sums utterly disproportionate to the duties they are compelled to discharge; while in other cases, where the amount of remuneration is left to the discretion of Government, or to the award of officers in public departments, it is often unjustly and degradingly inadequate.

"We most strongly, but respectfully, protest against the amount of remuneration offered by the Board of Health to physicians and surgeons for attending fever hospitals during the present epidemic;

dying, was heard through the length and breadth of the land, and excited the national indignation to such a pitch, that the authorities were shamed into more active measures of relief.

as, in some instances, five shillings per day have been offered by the Board of Health for the discharge of that onerous, responsible, and dangerous duty.

"We need not enlarge on the importance and value of the services rendered to the country by the medical attendants of fever hospitals; neither does it seem necessary to do more than suggest that insufficient and degrading remuneration for professional services cannot fail to injuriously affect the public interests; and we confidently trust that your Excellency will take such steps as may, in your Excellency's wisdom, seem fit to remove those grievances, and cause such remuneration to be awarded to the medical officers of fever hospitals and fever districts as may be commensurate with the great value and importance of the duties required of them."

This memorial, together with the signatures, was forwarded to the Lord Lieutenant, then in London, in June, and the following answer was received on the 14th July, by which it appeared that the authorities in Ireland either felt themselves incompetent to decide upon this question, or had not powers to do so; and consequently they referred it to the Lords of the Treasury in London(*a*):—

"*Dublin Castle, 14th July*, 1847.

"Sir,—I am directed by the Lord Lieutenant to inform you, with reference to your letter of the 9th instant, that by the Act 10 Vic. c. 22, the salaries of the medical officers appointed under the 9 Vic. c. 6, are subject to such regulations as may be made by the Lords Commissioners of Her Majesty's Treasury, to whom, therefore, His Excellency has forwarded the memorial to which you refer.

"I am, Sir, your most obedient humble Servant,

"T. N. Redington.

"*To W. R. Wilde, Esq.*, 15, *Westland-row*."

And on July 26th, the following answer was received from the authorities in London:—

"*Dublin Castle, July* 26, 1847.

"Sir,—I am directed by the Lord Lieutenant to state that the memorial from physicians and surgeons, complaining of the rates of payment allowed under the temporary Fever Act, having been submitted to the Lords of the Treasury, their Lordships are of opinion

(*a*) The official letter to the Secretary of the Lord Lieutenant was signed, on the part of the memorialists, by their three secretaries, Messrs. Mollan, Williams, and Wilde; and the Secretary's answer was addressed to Mr. Wilde, one of the three secretaries: at this side of the water, therefore, every thing was done *selon les regles*: not so in London,—for the answer of the Lords of the Treasury was addressed to Mr. Cusack, who had *not had any communication whatsoever with them!!*

that the remuneration is as high as, under the circumstances of the case, they should be justified in granting.

"I have the honour to be, Sir, your obedient Servant,

"T. N. Redington.

"*J. W. Cusack, Esq., M.D.*"

The brevity of this is unquestionable; but it is certainly not very flattering in its manner, or condescending in its style. Surely a memorial upon so important a matter, signed by upwards of eleven hundred gentlemen, many of whom had risked their lives in the performance of their duty, and several of whom have since fallen victims, might have received a more courteous reply. And indeed it is to be presumed that, had not the authorities been swayed by some sinister influences, they would have deigned to have given, if not a satisfactory, at least a respectful and civil answer. They might have said that they had duly considered the prayer of the memorial,—were quite acquainted with the respectability of the parties who signed it,—were aware of the sacrifices they had made in discharging their public duties, and the great labour which those duties required. All this might have been said with perfect truth, and such an answer would have had the advantage of not being so laconic as to be actually insulting,—although the authorities might have refused, on the plea of the state of the public finances, to comply with what they must have confessed to be at least a respectful and a reasonable demand. It is idle to suppose that the gentlemen composing the Board of Health were not cognizant of this answer before it was communicated to the memorialists. Nay, it may be assumed as fact that the answer was shaped according to their wishes and suggestions, and accordingly we have every right to hold them responsible for a reply, the style of which is more suited to the mere executive instrument of an absolute government, than to the responsible minister of a constitutional monarchy.

You, Sir, as well as myself and others, have felt poignantly the necessity which obliges us not only to differ from, but to censure the conduct of Sir Philip Crampton in particular. Sir Philip has been now nearly half a century an hospital surgeon in Dublin, having been elected surgeon to the Meath Hospital on Friday, the 28th of September, 1798(*a*), and during that

(*a*) It may be consoling to Sir Philip to learn that in measuring his useful labours by the half century, I am only doing for him what was done for myself by my German translator, Doctor Bressler, in 1843, with this difference, however, that the honest German has ascribed to me an age truly Nestorean. In the preface, among other handsome things, Dr. Bressler

long period of time no man has been more active than Sir Philip in ably discharging both the private and public duties of his profession, and no man has educated a greater number of pupils, or delivered more instructive and attractive introductory lectures in the theatre of the Meath Hospital.

We all remember the brilliant addresses delivered by Sir Philip Crampton; the spacious lecture-room used then to be crowded to excess, the benches being occupied by students, most of whom, as was evident from the freshness of their complexions, and the provincial intensity of their curiosity, were recent arrivals from the country; while the reserved seats were filled by the most distinguished members of the medical and surgical professions, one or two of the nobility, and an occasional bishop.

None of us can forget how eloquently the Lecturer impressed upon his audience the utility of true medical science, as distinguished from mere empiricism; and how clearly he proved that it is impossible to obtain skill in the treatment of disease, without devoting year after year to patient labour in the laboratory, hospital, and dissecting-room. How earnestly used he to exhort the listening students to devote themselves to the cultivation of the accessory branches of knowledge! How awfully used he to depict their future guilt, if they neglected to study disease and its treatment! How skilfully did he enlist their interest by the introduction of some of the sublime truths of physiology; and which, by a method of illustration peculiarly his own, he made intelligible even to a Chief Secretary of State for Ireland? Would that it had been possible to daguerreotype the lecturer and audience at the moment he had achieved this triumph of art over nature! Alas, Sir, imagination cannot depict, nor can memory restore, such a scene; but how suddenly would a change have come over the spirit of their dreams, had he informed the anxious students at what price the bright reward of their dangers, toils, and privations was to be estimated by himself at a future day,—not, forsooth, the *honorarium* which he himself receives for every half-hour, the exact sum mentioned by Tacitus as the reward of victory, the guinea, the sovereign and the shilling, the *Aurum et argentum pretium Victoriæ*,—but the miserable crown a

says of me: "*Graves* hat in diesem Werke die Früchte einer *langjährigen Erfahrung* niedergelegt, &c., &c., und uns gleichzeitig inne werden lässt dass er, *der greise Arzt*," &c., &c. I need not translate this accurately, but the general meaning is, that Doctor Graves is a venerable physician, one who has long passed his *prima et recta senectus*, and whose experience commenced before the majority of his readers were born.

day! Would not this peroration have obliterated all the effects of his previous eloquence, and have dispersed the crowd, before he had arrived at "*Vos plaudite.*" In truth, Sir, and I say it with pain and regret, Sir Philip Crampton has lost the finest opportunity that ever a medical man enjoyed, of increasing the honour and dignity of his own profession, and at the same time upholding the cause of humanity in Ireland.

I am free, Sir, to confess that, from the moment the names of the members of the Board of Health were announced, I felt little confidence in its composition, and I augured unfavourably of its future operations. The present Government is not responsible for the appointment of this Board, the nomination having been made in 1846 by the then Secretary of State for the Home Department, Sir James Graham, during the premiership of Sir Robert Peel; and I may fearlessly assert that neither the public nor the profession in Ireland, or in England, anticipated a Board composed of these three medical members, and excluding Sir Henry Marsh, the then President of the College of Physicians, Dr. Stokes, Mr. Cusack, Mr. Carmichael, Dr. Croker, Mr. O'Ferrall, Mr. Kirby, Mr. O'Reilly, Dr. Hutton, Mr. Adams, Dr. Mollan, and many others whose names are long familiar to the public as persons connected with the management of hospitals and the treatment of disease.

It is but fair to observe that Sir Robert Kane cannot be held accountable for any of the acts of this Board, for his other occupations are so numerous and important as to render it quite impossible for him to attend to its duties: and besides, it may be remarked that, though a member of the College of Physicians, Sir Robert Kane has long since withdrawn himself from everything connected with practice. His name is an honour to the list of Fellows of that College, and his scientific labours are there justly appreciated; but certainly in that body he would not be selected by his colleagues to perform a duty such as that which devolves on a member of the Board of Health: and in truth the College of Physicians felt naturally most indignant when it became known that neither its President, Vice-President, nor any of its other members, were appointed to the Board of Health. I believe the same feeling was general in the College of Surgeons, for although Sir Philip Crampton happened at the time to be President of that body, it is well known that he was not selected on that account by the Government, all other members of the body being passed by.

As to my friend Dr. Corrigan, no one will deny his ability or industry, but many will doubt his wisdom in accepting the

amount of responsibility which has necessarily devolved on him; for during Sir Philip Crampton's absence in London and Sir Robert Kane's uniform non-attendance, Dr. Corrigan was for many weeks *The Board of Health:* and, consequently, neither the College of Surgeons nor the College of Physicians was represented at that Board. Now, Sir, however Dr. Corrigan's vanity may have been flattered by this state of things, it was by no means satisfactory either to the profession or the public; and even those who were best inclined to the learned gentleman, and most disposed to judge kindly of his actions, even they, I say, felt that he was not wise in maintaining a position in which the laws of physics were reversed, and the whole weight of the profession revolved *outside* the Central Board.

But Dr. Corrigan may be excused from becoming a little giddy when he ventures into the same car with Sir Philip, and, to the amazement of all, suddenly finds himself at an altitude so elevated, that his companion, although a veteran aeronaut, betrays distinct evidence of alarm. Indeed, it appears that, even when Sir Philip Crampton was in Dublin, Dr. Corrigan was *the Board of Health still*, or rather two-thirds of that Board, as is proved by the following return elicited by some observations made by Mr. David C. Latouche, published in Saunders's News-Letter of September 25th:

"From this return it appeared that from the 31st of March to the 14th August, 1847, Sir P. Crampton had attended forty-two meetings of the Board; Dr. Corrigan, eighty-seven meetings; Sir Robert Kane, two; and Mr. Twistleton, twelve meetings."

Dr. Corrigan certainly deserves much praise for his diligence; but surely the Government did not act wisely in so constituting the Board that it became a nonentity the moment he ceased to attend.

Now when we call to mind that Dr. Corrigan's numerous avocations as a lecturer, an hospital physician, and a practitioner of considerable repute, must ingross a great deal of his time, we begin to tremble for the very existence of the Central Board of Health; but we need be under no apprehensions on the subject, for it appears to be *proven*, that the learned Doctor, no matter wherever else he may be, *is always there*, in virtue of a miraculous *ibiquity!*

In the Freeman's Journal, 22nd September, 1847, an account is given of a meeting of the South Dublin Union Sanatory Relief Committee. In it we find that Mr. David C. La Touche said,

"That he had frequently visited the Board of Health, *and invariably found that the only member who attended was Dr. Corrigan.* He was fully sensible that the Board of Health was a very inefficient body. If they had an effective Board of Health the state of the prevailing epidemic would be very different from what it was at present."

The following letter from Mr. Latouche to Sir Philip Crampton may be very satisfactory to the honourable Baronet, but it contains matter so condemnatory of the Board, and, consequently, of the Government who relied on it, that I much wonder at his allowing it to be published; but, no doubt, his discretion was overruled by the ardour of his self-defence, for it appears from this letter that when Sir Philip was away all went wrong!

"*Castle-street, 24th Sept.*, 1847.

"My dear Sir Philip,—I had already complained of the manner in which what I said at the meeting of the South Dublin Relief Committee on Tuesday last was reported, and it is my intention to do so at the meeting to-day. So much depends on context that it is impossible without hearing it to judge accurately of detached expressions. I have no doubt that I said what amounted to the substance of what has been reported; but as only two or three expressions made use of during a long discussion are reported and put together out of their natural connexion, a totally erroneous colouring has been given to what I did say. I can assure you that nothing was further from my intention than to impute blame individually to you, although, from the way what I said is introduced, it would appear that you were aimed at. I thought, and still think, that the Board of Health has not been by any means as efficient as it ought to have been, and that its constitution is defective, the members having offices and occupations which render it impossible for them to give the needful attendance; but I believe that when your health permitted you to attend you were by far the most useful and efficient member of it. I did state that I seldom found any one there but Dr. Corrigan, and such is the fact. I also stated that he was frequently not there till after five o'clock, the regular office hours being half-past four o'clock in the afternoon, and I complained of this. I perfectly recollect that on the two occasions you mention I met you at the Board; indeed I went there because I knew you were there, and you at once overcame difficulties that were raised by other members, and facilitated the business I came upon. I regret that, from the manner in which it appeared in the newspapers, I seem to have volunteered an attack on persons who were absent, when in fact what I said was drawn out by what was passing at the committee; and I expressed my opinion freely, and perhaps without sufficient consideration: at the same time I cannot recollect having said anything inaccurate, or that, if the context were given, could cause you any uneasiness.

"I am very much obliged to you for taking the trouble to write to me on the subject, and am, my dear Sir Philip, your's very sincerely,

"David C. Latouche."

Those who are aware of Mr. Latouche's abilities, and the zeal he displays in the discharge of the many benevolent duties he undertakes, must feel that this letter is a *heavy blow and great discouragement* to the Board of Health. As Dr. Corrigan *was always there* when Mr. Latouche went to the Board, it is quite clear that even his punctuality and capabilities for transacting business are seriously impugned by Mr. Latouche's explanatory letter, in which the writer endeavours to throw some of the blame of raising unnecessary difficulties off the shoulders of Dr. Corrigan, by using the expression, "*difficulties that were raised by other members.*" But Mr. Latouche's good-natured politeness cannot, Sir, prevent us from remembering that on the previous meeting of the Relief Committee his testimony was quite clear as to the fact that Dr. Corrigan *was the only other person he ever found there;* and, consequently, the weight of Mr. Latouche's implied censure falls on Dr. Corrigan, and must prove to him anything but galling, that weight having been shifted to the learned doctor's shoulders with infinite grace, ease, and adroitness by his colleague!

The appointment of the present Board of Health was evidently impolitic on the part of the public authorities. Those who found public institutions, such as the College of Physicians or the College of Surgeons, should not be the first to proclaim their inutility. What is the use of having a Royal College of Surgeons, or a King and Queen's College of Physicians, if Her Majesty's ministers publicly repudiate their functions? Would a proceeding like this be even tolerated in London?—would it be ventured on? Most undoubtedly not. Such exhibitions of unconstitutional proceedings are reserved for Ireland. I say unconstitutional advisedly; for every act of Government which annuls the recognised functions of public bodies without an Act of Parliament is an act revolutionary in spirit.

In previous epidemics, and particularly during the outbreak of cholera, such was not the line of conduct pursued by the Government. Why, then, were unusual means had recourse to on the occasion in question? Why was the Board of Health, which is still in existence, and composed of physicians and surgeons belonging to the two Medical Colleges, passed over(*a*).

(*a*) In the year 1801 an epidemic fever of great extent and mortality pre-

Bad as the conduct of Government and the Board of Health has been, the defence set up by them or for them is still worse; for the Evening Post, the organ of Government in Dublin, has not scrupled to charge those who signed the memorial with having done so for the purpose of embarrassing Government on the eve of the then approaching elections.

The articles to which I allude are headed "Election Cry of the Doctors," and form two lengthy leaders of several columns in that newspaper. They contain some matters of minor detail, to which I shall draw attention at another time, but as

vailed in Ireland; there was no Board of Health at that time, but the Army Medical Board, at whose head was Dr. Renny, were the chief advisers of Government.

In 1818 a Central Committee of Health was appointed by Government. Of this Board, the late Dr. Robert Perceval was chairman; the members were composed of physicians to the principal hospitals, with some of the managers and governors of these establishments, viz.: Drs. Perceval, Cheyne, Taylor, Stack, Barker, with Mr. Harding and Mr. Adair. This Board was not paid. It was dissolved in the following year.

For further information of all proceedings for relief of sufferers in that epidemic, see the published authorized account by Drs. Barker and Cheyne.

In 1820 the *General Board of Health* was constituted. The number of its members was fourteen, of whom five were medical. They were selected from the principal medical attendants of Dublin hospitals, and from those managers or governors of hospitals who were men of business. This Board still exists. None of the Members of this Board were paid, except the Secretary, Dr. F. Barker.

By this Board the proceedings adopted for the relief of sufferers from fever in the west of Ireland, when fever prevailed there epidemically in 1822, were advised and managed. In the year 1826 also, when fever prevailed to a most unusual extent in Dublin and its neighbourhood, temporary establishments were formed and beds provided in these to the number of 1378, its arrangements were made by Government under the advice of the same Board.

When cholera visited Dublin in 1831, 1832, the primary arrangements for its prevention and treatment were made by that Board; and Reports printed and largely circulated, before and after the appearance of that disease.

Boards of Health were then regularly constituted throughout Ireland, as prescribed by law (58 Geo. III. c. 47). Their number amounted to nearly 600, and Reports from these Boards were embodied in a tabular form, and transmitted to Government by the General Board of Health.

From the increase of cholera in the country it was soon deemed advisable to have a Board in Dublin, limited in its operations to cholera; accordingly, a *Central Board of Health* was formed. Its members were, three physicians, Dr. Crampton, Sir James Murray, and Dr. Barker, its secretary, with Mr. J. M. Pike and Mr. W. English, members of the managing Committee of the Cork-street Fever Hospital. The members of this Board were paid. It was continued for about one year, or until the cholera had evidently declined; it was then dissolved, and its business transferred to the General Board of Health.

The circumstances of Dublin during the presence of cholera, the panic which prevailed, and the extraordinary exertion deemed requisite to meet such a plague, called forth the appointment of another *Board of Health for the City of Dublin*, constituted under the 58 Geo. III. c. 47, and vested with the powers conferred by that Act. It consisted of thirteen members, selected

their chief object was to make the Public and the Government *in England* believe that some party or sectarian motive was the mainspring of this respectful and *unpolitical* representation, I shall confine my remarks to that part of the subject on the present occasion.

This organ of the Government and the Board of Health says that it is

"Sorry to see them," the profession, "come forward at such a time and in such a guise, exhibiting themselves in the attitude, on the one hand either *as combinators for a rise in wages, or, on the other, as whining suppliants for a dole of public money.*"

from the most influential professional, mercantile, and private individuals of the city, viz., the Lord Mayor, John David La Touche, Sir Wm. De Bath, Bart., Sir John K. James, Bart., Sir George Morris, Sir Henry Marsh, Bart., J. W. Cusack, M. D., Leland Crosthwaite, Esq., B. B. Smyth, Esq., &c., with Dr. F. White, the present Inspector-General of Lunatic Asylums, for their secretary. The members of that Board were unpaid; the secretary received a salary. It was continued during the extensive prevalence of cholera, and was then dissolved, as the Act, 58 Geo. III., under which such Boards are formed, directs, and its business was transferred to the General Board of Health. The entire hospital arrangements for the city of Dublin devolved on this Board, and the following was the plan they laid down and carried into effect,—a plan which, both for its efficiency and the scale of remuneration to the medical officers employed, stands forth in marked contrast with the regulations of the Board now existing:—they appointed a chief physician to each of the hospitals, at a salary of three guineas a day, and an assistant or junior physician at one guinea a day, both of whom resided at the Hospital; and physicians were also appointed as district inspectors at one guinea a day each. When cholera was subsiding, and the duties much diminished, the fees were gradually lessened also; but this Board never recognised the principle of allowing a remuneration so low as five shillings a day; and when they did lessen, a certain sum was given to each physician on the breaking up of the staff. The payments to the medical officers made under the authority of the Board, were advanced by Government, but were repaid by grand jury assessments.

No Board has been formed in Dublin since that time until March, 1846; Reports to Government on the progress of disease, and advice as to its prevention, being made periodically, or as occasion required, by the General Board of Health, until the 9 Vic. c. 6, was passed, 24th March, 1846, to meet the epidemic disease now so widely spread through most parts of this country.

In 1819 the four provinces of Ireland were inspected by Drs. Cheyne, Crampton, Clarke, and Barker, and reports made by each of them, which were afterwads printed in the Report of the Select Committee of the House of Commons on the state of Disease in Ireland. These medical inspectors received four guineas per diem, and their expenses were also defrayed.

The physicians of the Fever Hospital in Cork-street received gratuities for their additional services performed during the extraordinary prevalence of fever.

On the application of a Board from the country for medical aid, the local Board engaging to pay the physician sent down at the rate of two guineas per diem and travelling expenses, a medical gentleman was sent down by the Central Board of Health. All expenses of this kind were repaid to Government by grand jury assessments. Many physicians were sent down to local Boards in the country and at the time remunerated at that rate.

"We thought it at first strange that this 'Confederation,' or 'Representation,' or 'Botheration' (we beg pardon, but being of a poetical turn, and all, including 'Conciliation,' rhyming together, we are always confounding them),—we thought it strange that, instead of confining itself within the legitimate course of remonstrance with the Board of Health and the Government, which would appear to be the plain and obvious course to pursue, it should for some time past, in periodicals and papers, have laboured to throw odium on the Government, and to damage it in the eyes of the whole profession, and as much as possible in the estimation of the public. We thought this a strange course of proceeding; we began to think (we could not help it) that there was more in this than met the eye, and we could not resist the conclusion which has finally grown upon us, that consideration for the 'hardships and injustice sustained by the profession' formed a very small element in the agitation, and that one of the main objects was to make use of the alleged grievance as a means of exciting the opposition of the profession against the Government in the approaching general election."

And again it adds:—

"A party motive would be, just now, less unworthy than a mercenary feeling. The prostitution of the profession for party purposes may be but blindness; but its occupation at the present time, by a mercenary spirit, would be deep disgrace."

At the time these articles were written Sir Philip Crampton was in London, and, therefore, the arguments and spirit must have been derived from some other source. The editors of newspapers are necessarily supplied with materials by those whose cause they undertake to defend, and consequently the indignity thus offered to the profession is imputable to some other member of the Board of Health than Sir Philip Crampton; at all events, not a single member of that Board has come forward to disavow the authorship of a charge which is on the very face of it false, for the memorialists count among their numbers all shades of political and religious opinions, and consequently could have had no such object in view.

We have a further proof that from the Government or the Board of Health emanated these articles so abusive and insulting to the medical profession, in the fact that they contain matter which was only within the reach of the official authorities.

The assertions of the Post have been already ably answered in several periodicals, particularly in the Lancet, to the spirited support of which, during the late crisis, the medical profession in Ireland is in an especial manner indebted. The accusation of the Post was completely answered in the Even-

ing Packet, and the Nation has also raised its powerful voice in defence of the honour and dignity of eleven hundred Irish gentlemen. The Lancet of the 17th of August writes:

"The Dublin Evening Post, under the guise of defending Messrs. Crampton, Kane, and Corrigan, continues its vilification of the medical profession, growing, as might be expected, more and more abusive as its arguments become less and less weighty. It first attacked the Irish Representation as an 'Electioneering cry of the Doctors;' and it now refers to it in its pages as 'The Doctors' Dodge.' The articles of the Post have been not merely replied to, but fully answered, by the Evening Packet and the Nation; but the Post is so pugnacious that it still clamours for new opponents.

"We are ashamed to say that the first article of the Post was written in consequence of a letter, published in its columns, from Dr. Brady, a member of the Irish College of Physicians, taking part with the members of the Board of Health against the eleven hundred medical men who signed the Representation to the Lord Lieutenant, protesting against the payment of five shillings a day for attendance on fever hospitals. Dr. Brady termed the protest, signed by nearly every man of note or eminence in Dublin unconnected with the Board of Health, a 'combination amongst the members of the medical profession with a view of obtaining increased and unusual remuneration;' and argued the matter just as he would have argued a strike for wages amongst mechanics or day-labourers. The respectful demand for just payment for the most dangerous services which can be rendered to the State, was, to Dr. Brady's ear, 'a growl of discontent,' and remarkable as 'the first occasion on which the medical profession of this country has exhibited a mercenary disposition.' Dr. Brady has been, we believe, a gratuitous lecturer, and, as we are informed, is one of four or five medical men in Dublin who have had the temerity to run the gauntlet of professional opinion, and embrace the degrading offer of the Board of Health. He had previously accepted three shillings a day from another Board, and was, therefore, in no position to criticise as mercenary growlings the remonstrances of those who knew better what was due to themselves and their profession.

"The misrepresentations of the Post, in designating the movement in the medical profession as political in its character, is almost too absurd to be dealt with seriously. The Representation was signed by men of all parties and all ranks in the profession, among whom combination for any political purpose whatever would be impossible. We say the question of a just remuneration, the sense of insult and degradation to the profession, were the only motives that could have banded together so large a number of medical men. The wrath of the Post is unbounded that just at this particular time justice should have been demanded by the profession. Because in times past medical men have performed their dangerous labours, and

taken the miserable pittance awarded by Boards and Governments, our Dublin scribe would hold to it as an everlasting precedent that in all times and seasons, under every change and circumstance, medical men should suffer the injustice to go on unquestioned. Let the organ of Messrs. Crampton, Kane, and Corrigan, argue the question upon its real merits; let the Post take the dangerous duty required of the medical men *as it is*, without these foolish lookings before and after, and let it say whether five shillings a day is or is not a fair and just payment for such services from such a body as the medical profession of Ireland. Then we shall know how to deal, in our turn, with the Board of Health; for the profession is bound, in self-defence, to identify the Board with its official defenders, and to hold them responsible for its principles. We acknowledge that medical men have taken five shillings a day on other occasions; we acknowledge that they have received even less than this for services the most onerous and important. But we do not admit that the scale of payment was just, and that it was such as could never be agitated against without incurring the abusive attacks with which the profession has been favoured by the official organ in Dublin. We acknowledge that the times have been when Sir Henry Marsh and Drs. Kennedy, Stokes, Law, Osborne, Croker, &c., have 'served in former epidemics, in 1826-7 more particularly, for sums varying from two shillings and sixpence to five shillings a day.' If these gentlemen had, in 1827, openly protested against such degrading remuneration, they would but have done their duty to themselves and to their profession; and when they, one or all, join in the protest of 1847, they are but fulfilling the highest duties that can bind a medical man. It seems absurd to find a political organ basing its defence of a public wrong purely upon precedent, when the very existence of that organ depends on its general advocacy of political and social progress. The profession desires to emancipate itself from what it feels to be a grievous wrong, and it is told that because it has once, or on certain occasions, silently submitted to it, it must do so for ever. If the Dublin Evening Post wishes to make itself further ridiculous, let it adopt the same line of argument upon the political topics of the day. It would soon be brought round to common sense or a stand-still by its contemporaries. We declare the only two ideas of the Post upon this subject to be, the misrepresentation that the movement is political, and the would-be argument derived from bad precedents."

The Lancet, in allusion to what it styles "the vulgar vapouring of the Post," asks:

"Why should it not grapple with the articles of the Evening Packet? Why does not the Post itself reply to the following, which contains the pith of the whole matter:

"'It is true that many men, now eminent in the profession, acted in 1827 and prior epidemics for five shillings per diem; but was this grievance the less felt twenty years ago because men had

not then the means for making their complaints known to their brethren, the Public, or the Government? How many grievances have existed with the precedent of centuries in their favour (but with the feelings of millions against them) until remedied at the fitting time? Precedents in favour of injustice come with a bad grace from a Government the offspring of reform; precedent is no argument for wrong, nor submission a pledge to support. It may be, and has been, an encouragement to tyranny that men have once submitted; but the act of submission gives no guarantee that the evil is to be submitted to for ever. Is there any reason why men who, in former years, may have been coerced into submission to a grievance, should on that account be now debarred from aiding their brethren in the endeavour to resist its re-infliction? The arguments used by the Post on this subject are utterly worthless, for they tend equally against all reform.

"'We might go over in detail the allegations of the Post, were they not so manifestly without foundation as to render refutation unnecessary; but with the style and manner of its comments on the acts and principles of a profession so deservedly respected as the medical, and on men who hold so high a station in the country as these who promoted this movement, we cannot observe a similar silence. Although we were long accustomed to the official insolence of a dog in office, we were not prepared for the uncalled-for volume of abuse poured forth against a respectable body of gentlemen by the Dublin Evening Post, which has denominated them "combinators for a rise in wages;" and "whining suppliants for a dole of public money;" which has stated that they "want common sense;" that their remonstrance is a "botheration;" and that the gentlemen who got up this memorial "would drag their dupes through a political mire, and make them blindly subservient to their own party purposes;" with other similar unjustifiable expressions which we need not quote.'

"Or if the popular principles of the Evening Packet be too conservative for the liberal Post, we commend it to the tender mercies of the Nation newspaper, in which the just rights of the profession are eloquently maintained, and the following contrast made between the Dr. Corrigan of private life and the Dr. Corrigan of the Central Board of Health; between the 'Parliamentary evidence' and the Board of Health 'scale of remuneration to medical officers.'

"'But twelve months since, or so, under Tory rule, he (Dr. Corrigan) published a *brochure* on Fever as the Complement of Famine. In that he protests, in the strongest manner, against fever hospitals (temporary or other) being built in connexion with poor-houses. He shews its effects in the spread of the disease, and, with great humanity, declares disease should not be made a chain to drag a man into the workhouse. But, then, Dr. Corrigan did not *diagnose* the Whigs; he had not, as yet, felt the pulse of an Excellency. However, since he has done so a new light has burst on him, and closed his mouth. In every part of Ireland, for the last six

months, fever hospitals have been erected in connexion with,—generally speaking, on the ground with,—the "poorhouses;" and every frightful consequence predicted by Dr. Corrigan has occurred. Yet Dr. Corrigan, since he published his pamphlet, has been in the "Board of Health;" and, being there, he felt the viceregal pulse, and held his tongue.

"'Nay, his whole principles are changed. If we wish for a handbook on medical legislation,—on the rights and duties of a profession which is behind none in learning,—which, since Bacon's day, has led the van of human science, impelled by charity and the true student's enthusiasm; if we wished for a great example of the practical minuteness and broad, grasping mind of our native practitioners, we would point to Dr. Corrigan's own evidence before the English Parliament. By that one can see how destructive to the lives of the people, injurious to science, and degrading to the profession, and every member of it, is the rate of medical payment, prior to this year, followed in Ireland. But, put the man in office himself, change his point of view, immerse his head in a cocked-hat, the member of the Board of Health forthwith sees in the bad precedents an example to be followed, and becomes a partner in the insulting offer, to the members of his own profession, of five shillings a day as State payment, for constant fever practice, in sinks of contagion whose destructive atmosphere no man knows better than he.

"'Now, we especially notice Dr. Corrigan in this matter, because, in the year '46, before there was a single typhoid case, he predicted boldly, and, as we then thought, nobly, all the hideous results which have since followed. We confess we relied on him, more than on any other man in Ireland, for protection to the people. We knew he had the power; we thought he had the will. We hoped to see the war which he began as boldly and as nobly maintained. We hoped that, through him, the Irish profession would raise itself from the political apathy natural to its position, and tell the English Government, to its very beard, it should not murder. Nay, we hoped to see him lead on that profession in a bold, honest, national movement, independent of all foreign influence, to save present life, and protect from physical deformity and mental decrepitude generations to come. But look you, hardly had the last sheet of his promising *brochure* escaped from the press, when a huxtering Board,—a Board of "*Health*,"—a listless triumvirate to give contagion its fling,—was got up, of which he was one. His science and his humanity thereafter "went by the Board." The triumvirate was totally inoperative. The Act which formed it was a sham, and an intentional sham. And after an idle, useless existence of twelve months, when contagion had spread over the whole land, when the public voice shouted, "where was the Board of Health?" it modestly declared its existence, and that it could do nothing. Whereupon the sham Act was amended. The triumvirate was empowered to appoint medical officers to new fever hospitals, or to districts requiring domiciliary attendance. And lo! forth it comes with its

scale of prices for the greatest amount of medical ignorance, coupled with the coolest medical presumption.

" ' This proclamation at the Castle mart was ineffectual. Irish honour was not in sufficient abundance in the market. The sham bill, to amend the sham, would not do. Whereupon the Whig Government threatened, through the triumvirate, to send over a corps of state doctors from England, wisely adding another corps of sappers and miners to bury the additional dead consequent on the coming of the former. Yet this seemed dangerous; and a new plan to carry out the insult was adopted. The five-shilling commissions were sent to individuals in order to press them into the service. One gentleman, whose name we cannot couple with terms of sufficient respect, Dr. Curran, of this city, flung back the degrading offer in the triumvirate's teeth; and, to prove the unselfishness of his conduct, has, we are informed, without fee or emolument, ever since discharged the duties of a dispensary doctor in a densely populated and unhealthy locality. A spirit,—would to God it had been exhibited twelve months ago!—revived in the profession. A respectful but firm remonstrance to Lord Clarendon was adopted, and presented to that personage with *one thousand and sixty signatures attached.* We point with a national pride, and still with sorrow, to that array. Men of European fame, whose opinions dictate to life in the schools of Paris and of Germany,—men who still have preserved, for Ireland, the foremost rank in surgical and medical science,—men of all religions, of all politics, stood together,—an Irish profession at last. And the treatment they received was befitting an Irish profession. First, an official note from Mr. Redington informed them that their dignity and their interests were not in his hands, but in those of the English " Lords Commissioners of Her Majesty's Treasury." And then another as coolly informed them that " their Lordships" (their English Lordships) are decidedly of opinion that the " remuneration was as high as, under the circumstances of the case, they were justified in granting.' "

Here follows the Answer already quoted.

" Such was the answer received from the Lords of the Treasury to whom the Representation of eleven hundred educated medical practitioners was phoo-phood by the Irish Government. Unless justice could have been awarded to the profession, the members of the Board of Health, Sir Philip Crampton, Sir Robert Kane, and Dr. Corrigan, should have resigned their posts, and given to other and to non-medical hands the labour of degrading the profession after its formal remonstrance. As it is, these gentlemen, for the present, hold their seats; but they have embittered themselves with the vast majority of their profession. They will find, in the end, that they do not please either party; for governments have a singular tendency to turn their backs upon unpopular servants whose acts and deeds are before the Public. Even now they are bound to resign their appointments; or to shew that five shillings per diem is

a just and honest remuneration to offer to educated professional men on a service more fatal than any war service in the world; or else they must take the universal reprobation of their brethren."

Another argument used by the Post for the *five shillings* remuneration, is that the present Board of Health was only following former precedents. But if a precedent be of any value, it is only so far as it is good in itself, and only so far as it is worthy of adoption on its own merits. If bad precedents were to be followed, an error once adopted would become perpetual; injury would follow injury; injustice would beget injustice, and regeneration become impossible. But although precedents may be found in favour of the tariff proposed by the Board of Health in the year 1826, yet it should not be forgotten that, during the invasion of the cholera in 1832 and 1834, Government contended against the evil with all the forces of the Empire—*totis viribis regni.* During that year hospital accommodation was provided, sufficient to allow the admission of every poor patient, and that at a time when from sixty to one hundred sickened daily in this city; and physicians, apothecaries, and nurses, were liberally remunerated for attending the sick in all parts of the island, wherever the epidemic raged,—the former at a salary of two guineas a day.

Have the duties performed by the Board of Works been more important than those intrusted to the Board of Health? Assuredly not. And yet it appears by the returns that they had many thousand officers employed at an enormous expense; and of these thousands thus employed, I question whether a single individual was upon so low a salary as five shillings a day, no matter how unimportant the duties he had to perform, whether it was to carry a chain for a surveyor, or weigh out Indian meal to the hungry. It is objected that the question of remuneration should not be raised during the present calamity. But it is only in such a crisis as this that the services of medical men are needed. And of these services what is the reward? They labour, toil, and peril their lives; they perish and fall victims; and how are their families requited? What honour consecrates their memories? What prizes reward their success? A short paragraph in the paper, announcing, in a manner so frequently repeated as to have become formulized, their decease in consequence of disease contracted in the discharge of their duties. But the Public are now hardened; they feel no sympathy when they read such an announcement; and they think that all M. D.'s have a right to die for the benefit of the Public. Within our memory the Govern-

ment has interfered but once in favour of the family of a physician who thus fell a victim in struggling against epidemic fever. Dr. Browne, of Galway, was the instance to which we refer. He was a single man, but the Government of the day gave annuities of £50 a year each to his brother and sister, who are still alive, and in receipt of the sums. Our esteemed friend, the Editor of the Dublin Evening Post, is well aware of the facts of this case; and we hope that he will exert his talents in pressing on the Government the necessity of succouring the families of the many physicians who have died during the present epidemic.

Until the publication of the valuable paper by Drs. Cusack and Stokes in the last Number of your Journal, the Public were quite unaware of the great extent of danger which attends the practice of the medical profession in Ireland.

It can scarcely be doubted that, as soon as the knowledge of the facts disclosed in that paper becomes familiar to the Public and to the Government, they will no longer leave the families of medical men who die in consequence of contracting fever in the discharge of a public duty, unprovided for; or that any Government or Board of Health will dare to propose again such a tariff of remuneration as has in the present instance excited the indignation of the profession and of the Public. The education of a physician is laborious, tedious, and expensive; the practice of his profession is dangerous; the reward, in private practice, uncertain, and in the discharge of public duties, almost none. And consequently, under the present system, the number of well-educated, scientific, and skilful men, who will undertake the duties of attending the sick poor, must diminish every day; and the end of the system will be, that the poor man shall receive advice and medicine for which little or nothing is paid, and from which little or no benefit can be derived. There are those who refer to the system of medical relief in the poor-houses and poor-law unions of England, as a precedent to authorize the low rate of remuneration now adopted by the Board of Health and the Government. But the Public even in England are beginning to be painfully aware that they have disgraced themselves in the eyes of Europe by intrusting the lives and health of the poor to the lowest bidder. The consequences have been most blighting to the finest feelings of human nature, and there is much reason to fear that the masses of society in England are already seriously demoralized by this system. This sad conclusion seems to follow inevitably from the facts connected with the death of the poor orphan Duigenan,

concerning which, Sir, I feel too strongly to allow myself to speak, and therefore I prefer quoting a paragraph from the Daily News respecting that sad tragedy:—

"A searching inquiry will, no doubt, be instituted into the circumstances in which two Irish paupers, removed from the Rochdale Union, met their deaths on board the steam ship Duchess of Kent, on the voyage between Liverpool and Dublin.

"Assuming that the statements which we have recapitulated are true,—and we fear there is no ground to doubt them,—they display a most culpable indifference to the sufferings, and even disregard of the lives, of the poor. The worst of the case is, that the indifference and disregard appear to be part of an extensive system.

"There is a shocking callousness in the haste with which the authorities of the Rochdale Union appear to have transferred an orphan lad from the wards of a fever hospital to a third-class railway carriage on a rainy day, and to the deck of a steam-boat on a stormy night, while he was yet so feeble from the effects of his illness that he could not sit unsupported in the carriage, and had to be carried on board the boat. But the consequences of this heartless conduct were aggravated by the concurring inhumanity of many others. The reckless way in which the unions throughout Lancashire hurry off their return paupers is the cause why the deck of the vessel was so overcrowded that people were lying on the top of the dying boy, and that he was apparently ejected from the imperfect shelter of the stable. The guardians and officers of the Rochdale Union form but a small section of the crowd against whom the presumption of inhumanity presses so strongly. And the municipal authorities of Liverpool, or the managers of the docks, cannot be acquitted of complicity in allowing night after night the Dublin boats to sail thus surcharged with densely packed masses of suffering humanity.

"We may go further. This transporting of paupers, with a recklessness which no grazier or drover would exhibit in the case of cattle, is part of a great national neglect of duty. The death of the two paupers on board the Duchess of Kent, like the bone-breaking and eating of unclean flesh in the Andover Union, is only one of those appalling incidents which recur at too frequent intervals to remind us, of the easier classes, how apt we are to forget our poorer brethren. It is not inhumanity or covetousness among the proprietary classes, but a forgetfulness scarcely less culpable, that gives occasion to such suffering. It is not enough that rates be levied, and workhouses built, and overseers appointed to relieve the poor with due discretion. All this is the mere machinery of charity-administration; and machinery, left to work of itself, is too iron a thing to subject frail humanity to. It is the duty of the rich, and the independent of moderate circumstances, to watch strictly their ministers of charity, and see that the wants of the poor are cared for in a spirit of humanity. In a numerous and complicated popula-

tion, like that of Great Britain, individual charity is unavailing: there must be a public organized system for its administration. But the establishment of such a system only alters the mode in which Christianity requires us to discharge the duty of charity. In small and simple communities those who have the means ought to give alms; in multitudinously peopled empires they ought to keep a jealous watch upon the working of the machinery for administering public charity, and take care that the poor are treated as brethren."

And in truth the boasted humanity of England, and its exertions for the emancipation of slaves, earn her no credit with foreign nations, for they say benevolence has not been the moving power which produced these actions, but self interest; for no humane nation could set so little value upon life and health. Compare the remuneration of medical men,—compare the rewards offered to those whose efforts are directed to the restoration of bodily health and the preservation of life,—compare their rewards, I say, with those conferred upon the professors of the law, or the ministers of religion,—and they will be found comparatively insignificant. What government would venture to proclaim that five or six hundred barristers of great skill in their profession,—of great learning in the law,—were required for several months in different parts of the country, and were expected to perform the onerous duties required, at a remuneration of five shillings a day. Such a proposal would shake any government to its foundations, and would excite such an outcry within the walls of St. Stephen's as would confound and terrify any Ministers. But, in truth, the English Government has of late been pursuing systematically a line of conduct tending to depreciate the medical profession in the eyes of the public. They have abolished the office of Physician-General and State Physician; that of Surgeon-General or of State-Surgeon no longer exists; and no honour or reward from Government awaits the civil practitioner of medicine in Ireland.

I have already observed that the Evening Post accuses the promoters of this remonstrance of having been animated by political motives; an accusation which the Editor must, on cool reflection perceive was ungrounded. But let the Government beware of forcing the profession into an attitude hostile to British connexion; let them persevere in the course they have adopted, of withdrawing all rewards from the profession in Ireland; let them, as they have recently done, add insult to injury, and they may, perhaps, succeed in reconciling the political differences of opinion which exist between the 1160 gentlemen who signed the remonstrance, and may force them all to agree

in thinking that a better form of legislature for Ireland might be devised than that which has been hitherto so successful in degrading the medical profession.

The Board of Health have published the following Tariff, in which they say the various salaries are given in addition to any permanent salary which the fortunate medical attendant may possess.

"*Remuneration to Medical Officers.*

"1. For attendance on temporary fever hospital, established within the town or district where the medical officer resides, in addition to any permanent salary he may receive as medical officer of any existing institution, 5*s.* per day, or £91 5*s.* per annum.

"2. For attendance on dispensaries, under similar circumstances, 5*s.* per day, or £91 5*s.* per annum.

"3. For attendance on fever hospital and dispensary together, under similar circumstances, 10*s.* per day, or £182 10*s.* per annum.

"4. For attendance on fever hospital, where medical officer is sent to distant district, one guinea per day, or £383 5*s.* per annum.

"5. For attendance on fever hospital and dispensary, under similar circumstances, two guineas per day, or £766 10*s.* per annum.

"6. For medical inspection, under direction of Board of Health, two guineas per day, and travelling expenses.

"Separate provision is made for compounding and dispensing medicines."

We have already, in common with 1160 Irish practitioners, expressed our opinion with regard to this 5*s.* per day; the Board of Health has, however, in the document alluded to, endeavoured to impress the Public with the belief that this remuneration is merely in addition to some permanent salary which the medical attendant is supposed to be receiving for public medical service. Now with as much right might it have been published in this authorized manifesto: "in addition to any permanent" vested interest, patrimonial inheritance, or private practice, which such an individual might have been possessed of. But the insinuation is totally fallacious, because the appointments which have been made have been often irrespective of the circumstance of the physician or surgeon so appointed being an officer to any institution.

Another fallacy in this first item to which I would draw attention, is the statement of the salary being so much per annum, and that by a temporary board, for temporary attendance under a temporary Act, which cannot by any means continue in operation for a year; and which appointment may not be

for a month, or even for a week. It is unfortunate for this "per annum" subterfuge, that the Act does not extend its operation through the next year, as the Board of Health might, in that case, it being leap year, dilate their boasted stipend to the sum of £91 10*s.*

The fourth item appears to me, and has proved in its working, to be the most iniquitous of all. A medical officer of an infirmary or dispensary is required to attend a fever hospital or dispensary recently set up in his vicinity, for a remuneration of 5*s.* per diem, "in addition to any permanent salary;" for this paltry sum he is expected to perform duties which must necessarily interfere to a great extent with his private practice, which may oblige him to neglect other patients, which may even endanger his life; and should he hesitate, the threat is held over his head to send down to the same street it may be, some tyro, some protegè of a Commissioner, at a salary of a guinea a day, "£383 5*s.* per annum," as the Board take pains to calculate for us; or if this fortunate youth get both a dispensary and hospital, he has "two guineas a day, or £766 10*s.* per annum," to enable him to dispossess his refractory predecessor.

With one more observation I shall dismiss this document. Temporary as may appear to be this medical tariff, there can be no doubt that its effects are intended to be of a more permanent nature; indeed the addition of Mr. Twistleton to the Board of Health is conclusive as to the intentions of Government on this head, and therefore I take leave to warn the medical profession in Ireland to be cautious as to what remuneration, even of a temporary nature, they receive; for they may rest convinced that the Poor Law Commissioners will very soon take advantage of the ground thus pioneered for them by the Board of Health. By the amended Poor Law Act for Ireland, passed in this session, boards of guardians may be displaced, paid officers appointed in their stead, fever hospitals may be erected, dispensaries founded, and medical attendants appointed, their duties regulated, and their salaries fixed, by the sole and arbitrary will of the Commissioners; and, under such circumstances, our Irish brethren cannot be too wary in permitting an estimate to be affixed to their services.

It is constantly repeated that the fact of many medical men accepting the five shilling remuneration is a justification of the Board of Health. I cannot, nor will any just man think so; for the real degrader of the profession is here less the man who takes than the man who offers. Nor will it hereafter redound to the honour of the Board of Health that they lent themselves to the

system of presuming on the necessities of a poor but honourable profession, and aided the Government in the attempt.

But, Sir, it may be asked, what was the Board of Health to do? Was it in the power of that Board to persuade or force the Government into granting a more liberal remuneration to those employed in the dangerous service of attending fever hospitals? In my humble opinion, the Board of Health would have found it an easy task to accomplish this desirable object. Who can suppose that the Lords of the Treasury would for a moment hesitate to award a becoming scale of salaries to medical men, when they were so liberal in paying the far more numerous staff of officials employed by the Board of Works. If the Board of Health had referred to the salaries given to physicians during the prevalence of cholera in 1832—a mode of proceeding the propriety of which I have already adverted to—if they had called on Dr. Barker to supply them with a list of the physicians then employed by the Board of Health, to which he was Secretary, and the amount of the salaries they received; there can be no doubt that the result would have been altogether different: but the Board of Health did no such thing,—they evinced no anxiety, at all events they displayed no diligence, in making researches on the subject of precedents, for they seem to have found none but those favourable to their pernicious tariff; they overlooked the precedents of 1832,—they discovered and praised those of 1817 and 1826. Had the Board found, contrary to all probability, that the Government was unwilling to be guided by their advice in the adoption of a liberal and just scale of remuneration, then, I say it without hesitation, they should have instantly resigned. If they had manfully taken such a course they would have gained credit with all honest men, and the public voice would have sustained them. Had they then evinced their sympathy with the profession, no underlings could have imagined that they were doing a good and acceptable piece of service in propagating the rumour, that if the medical men of Ireland refused the proferred stipend, the Government would dispense with their services altogether, and supply their place with a cohort of half-pay army and navy surgeons; a report at one time so rife as to excite observation in the House of Commons. But another report of a much more serious nature has been spread, namely, that no medical man who signed the memorial is to expect favour or countenance from the Government. This is a grave matter, and the more so, because *its* origin, *its* propagation, cannot be traced to subordinates of mean authority having no connexion with official persons. It is a fact, for the accuracy

of which I can vouch, that this report was used as an argument to dissuade physicians from signing the remonstrance. I am persuaded that this was done without the knowledge of the Government; and I am confident that the Earl of Clarendon will never countenance a system which seeks not only to grind down the profession to the level of the lowest mechanic, but threatens with civil disqualification any individual who dares to raise his voice in defence of what he conceives to be his just rights; nor shall I be readily induced to believe that the members of a liberal Ministry could have sanctioned the attempts made, both in this city and in London, to prevent the publication in the Journals of the arguments of the aggrieved remonstrants. I cannot trust myself further on this particular part of the subject; and shall, therefore, conclude by thanking the Editors of the English and Irish papers and periodicals, for refusing to exclude questions, relative to the interests of the medical profession, from the benefits of free and open discussion.

But I find, Sir, that I have trespassed on your patience, and have occupied so much of your valuable space, that I must defer the further discussion of this important question until your next Number, when, having disposed of the general considerations in my present letter, I hope to enter upon the practical details and actual working of the five shilling principle and machinery, and thus approach the body of our subject more closely.

I have the honour to remain, Sir,
Your obedient Servant,
Robert James Graves.

POSTSCRIPT.

October 6th.

The following announcement appeared in the Dublin Evening Post of October 2nd:

"FREE GRANT FOR FEVER EXPENSES.

"We have extreme gratification in announcing that the Lords of the Treasury have authorized the Relief Commissioners to make a free grant of the entire amount advanced to the relief committees, under the 10 Vic. c. 22, for fever expenses in Ireland. This, certainly, is a great boon, and will prove a seasonable relief to the ratepayers throughout Ireland. In the North Dublin Union alone the amount expended for fever was upwards of £6000."

I certainly agree with the Editor that *this is a great boon*, but I cannot help thinking that this free grant would have been much more useful had it been made at the commencement of the epidemic, for it would then have prevented the indecision and calamitous delay which occasioned such heartrending scenes of misery, and such lamentable loss of life.

This boon, too, if granted at any earlier period, must have been received as an act of spontaneous benevolence, and voluntary national justice, and no one could have questioned either the motives of the Government or the prudence of the gift. Now, however, the case is widely different, and many will ascribe this tardy act of mere justice, to the chastisement which the Government and the Board of Health have received from the public journals in Great Britain and France; in truth Ireland will thank the Editors of the Lancet and the *Journal des Debats* for this *free grant*, rather than the Lords of the Treasury. It is pleasing, however, to find that their Lordships are not composed of such inexorable materials, as to be quite incapable of changing a resolution once formed, and their capability of arriving, though slowly, at a right conclusion, can leave no doubt on the mind of any one that they would have long since yielded on the question of the remuneration to be granted to medical men, if the Board of Health had only pressed it with proper energy.

I shall conclude by stating the curious fact that the Commission granted by Government for investigating the nature, causes, and mode of preventing the potato disease, cost the nation something more than *nineteen thousand pounds!* This sum is sufficient to pay ninety-five physicians a guinea a day each for six months. Homer says,

> Ἰατρος γαρ ανηρ πολλων ανταξιος αλλων.
>
> A wise physician skilled our wounds to heal,
> Is more than armies to the public weal.

The times are greatly altered since the Iliad was composed, for now one *potato commissioner* is more valuable than many physicians! I expect soon to hear that my friend Sir Robert Kane has succeeded in the process of self-analysis, so as to eliminate and get rid of the M. D. element from himself, as being the most unprofitable portion of his composition.

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